OLD!

THE ESSENTIAL GUIDE TO CLASSIC GAMES

retro GAMER

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MARTYN CHUDLEY ON THE STUDIO'S KEY GAMES – FROM WIZ 'N' LIZ TO PGR

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EVERY ASPECT OF JULIAN GOLLOP'S FANTASY STRATEGY HIT EXAMINED

UNLOCKING THE NES

THE HISTORY OF RAIDEN

MOSS' BOSS REVISITS THE ICONIC SHMUP SERIES

PLAYING WITH POWER: HOW DEVELOPERS UNLEASHED NINTENDO'S 8-BIT ICON

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QWAK
XEVIOUS
BIOFORGE
FIRE HEROES
WEREWOLVES OF LONDON
WARIOWARE: TOUCHED!
STREET FIGHTER 6

THE MAKING OF WORLD RALLY

THE ORIGINS OF THE CLASSIC TOP-DOWN RACER REVEALED

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EVERYTHING YOU NEED TO KNOW ABOUT TAITO'S ENTERTAINING PUZZLE GAME

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THE RETROBATES

WHAT'S THE MOST TECHNICALLY IMPRESSIVE NES GAME?

DARRAN JONES

I'll go for *Castlevania III: Dracula's Curse*, it looks and sounds amazing and is fantastic to play as well.
Expertise: Juggling a gorgeous wife, two beautiful girls and an award-winning magazine, all under one roof!
Currently playing: *Assassin's Creed: Origins*
Favourite game of all time: *OutRun 2006: Coast 2 Coast*

TIM EMPEY

I reckon *Metroid* was pretty impressive. It just needed *Castlevania* to start a whole new genre of games too.
Expertise: Finishing Game Pass games before they go
Currently playing: *Bayonetta*
Favourite game of all time: *God Hand*

NICK THORPE

Looking at *Batman: Return Of The Joker*, it's hard to believe it's running on the same hardware *Super Mario Bros* does.
Expertise: Owning five Master Systems and a Mark III
Currently playing: *Gunstar Future Heroes*
Favourite game of all time: *Sonic The Hedgehog*

ANDY SALTER

Contra showed that the NES was more than capable of handling arcade ports.
Expertise: Modding games, no 'vanilla' versions for me, thanks!
Currently modding: *Kenshi Universal Wasteland Expansion Mod*
Favourite game of all time: *Rome: Total War* although I guess it's the *Remastered* edition now.

RORY MILNE

I remember *Kirby's Adventure* being a real eye-opener. Its mechanics are as ambitious as they are eclectic, and its hero's ability to use defeated foes' powers is ingenious.
Expertise: The game that I'm writing about at the time of writing
Currently playing: *Midnight Club: Street Racing*
Favourite game of all time: *Tempest*

PAUL DRURY

I hate to be obvious but *Super Mario Brothers 3*. Never had a NES back then but my mate Kev had one in his student house in Manchester and playing this was as memorable as seeing The Stone Roses.
Currently playing: *We Love Katamari Reroll + Royal Reverie*
Expertise: Stan Lee's interior decor
Favourite game of all time: *Sheep In Space*

GRAEME MASON

I have always been impressed by the graphical trickery of Tamtex's *Metal Storm*. Gimmicky, possibly, but a little gem of a game nonetheless.
Expertise: Adjusting the tape azimuth with a screwdriver
Currently playing: *The Terminator*
Favourite game of all time: *Resident Evil 4*

MARTYN CARROLL

That would be Sunsoft's second *Batman* game, *Return Of The Joker*. It's so good it's almost SNES quality.
Expertise: Sinclair stuff
Currently playing *The Legend Of Zelda: Tears Of The Kingdom*
Favourite game of all time: *Jet Set Willy*

ANDREW FISHER

The NES adaptation of *Pac-Man Championship Edition* – it's incredibly playable and very well presented.
Expertise: Forty years of gaming, from Commodore 64 to Switch
Currently playing: *Polar Bear In Space: Bearable Edition*
Favourite game of all time: *Wizball*

LOADING...

One of the things I've always loved about the early days of gaming is that it was always easy to identify a system just by looking at the graphics of its games. That's a lot harder today, but during those halcyon days you could easily tell an Amstrad game apart from a BBC Micro game, or a PlayStation game from an N64 title. That was particularly true of the NES as well, as its distinctive, sometimes chunky sprites made it instantly stand apart from Sega's Master System, its nearest rival.

This month, Nick has done another of his wonderful technical deep dives where he delves into the guts of a classic machine and explains what made it tick and stand out from its peers. He's assisted by a couple of Rare stalwarts and also modern homebrew developers who are still making great games for Nintendo's console. If you love the NES, this is a great insight into what makes it so special.

If you're not a fan of Nintendo's 8-bit console, you'll find plenty more to enjoy, including articles on *Chaos* and *Puzznic* and some behind-the-scenes features on *Fantavision*, *BioForge*, *Werewolves Of London* and *World Rally*. We've a brilliant look at the history of *Raiden*, while Martyn Chudley looks back at his company Bizarre Creations and walks us through its many great games.

Stay safe and enjoy the magazine.

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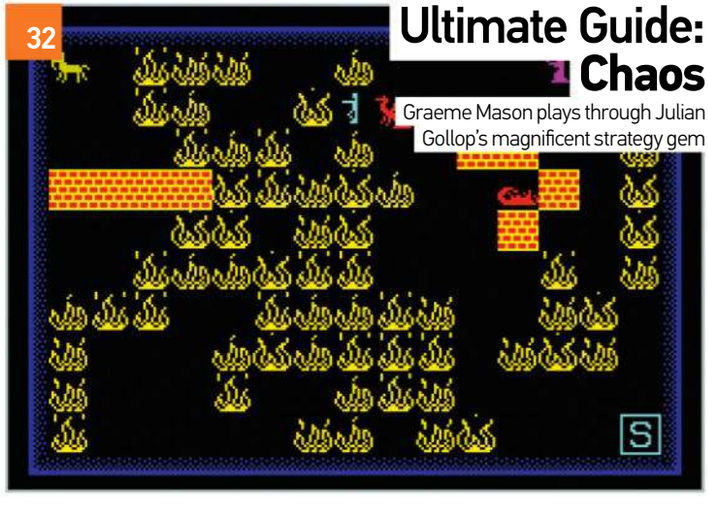

Ultimate Guide: Chaos
Graeme Mason plays through Julian Gollop's magnificent strategy gem

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A Tribute To: Bizarre Creations

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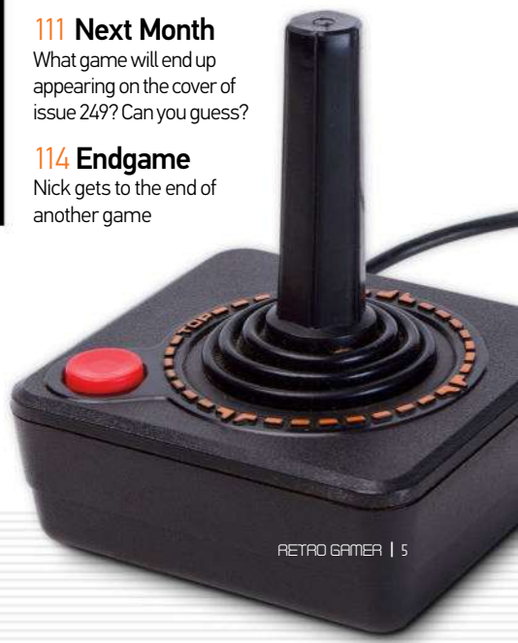

» [Evercade] *Another World* is available on numerous contemporary systems, but it's still nice to see it on Evercade.

COME GET SOME

Duke Nukem and more heads to Evercade

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Stephan Berendsen on three retro classics which are going to be modernised for PC and consoles

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Nick is once again traversing the timelines and has ended up in November 2006

» [Evercade] We're looking forward to the *Sydney Hunter* games, they look right up our street.

Blaze Entertainment recently excited Evercade owners with six new cartridge packs that will be heading to its systems by the year's end. Utilising a Nintendo-style Direct structure, Evercade Showcase Vol 1 proved a big success for Blaze, with its head of marketing Sean Cleaver telling us, "It went very well, and beyond our expectations! It's great to give our fans and interested onlookers new announcements, and seeing the interest and response is very humbling."

The 18-minute show kicked off with *Delphine Software Cinamatique Collection 1* which includes the Amiga versions of *Another World*, *Future Wars: Time Travellers*, *Operation Stealth* and the Mega Drive version of *Flashback*. Interestingly, two of the games are mouse-based so we were keen to know how Blaze will adapt them. "Original hardware did use a mouse but also had the alternative of standard hot keys in case there was no mouse or a fault," Sean explains. "So it may take a moment to adjust to a d-pad and the accuracy needed but it won't affect the playing of the games. They will work fine with the Evercade's d-pad and face buttons. None of these games present anything time-sensitive in the gameplay to warrant a faster input, however, for an authentic-feeling experience, we are looking at mouse support for Evercade VS users in a future update."

The next collection announced, *Piko Arcade 1*, is full of obscure arcade games, many of which originated in Korea. We're particularly excited about this one as we feel one of Evercade's strengths is with these quirkier collections. The included games are *Dragon Master*, *Master's Fury*, *Fancy World: Earth Of Crisis*, *The Legend Of Silk Road*, *Burglar X*, *Ultimate Tennis*, *Magic Purple*, *Steel Force* and *Diver Boy* and they cover everything from platformers to one-on-one fighters and scrolling beat-'em-ups.

» Sean Cleaver was pleased with Blaze's Evercade Showcase Vol 1 and has another planned for July.

Equally interesting is the *Sydney Hunter Collection*, a pack of four games that includes three adventures with the eponymous title star, *Sydney Hunter And The Sacred Tribe*, *Sydney Hunter And The Shrines Of Peril*, *Sydney Hunter And The Caverns Of Death* and a brand-new maze game called *Jester*. "This is a great collection of modern retro games from CollectorVision," Sean tells us. "Normally available as new games for original hardware, as a physical release, we're delighted to bring a great selection of them on one physical cartridge for only £17.99/$19.99 and give Evercade fans the chance to enjoy some very fun platform-based adventures!"

The fourth collection Blaze announced, like CollectorVision, marked another collaboration with a new publisher, Sunsoft. *Aero The Acro-Bat*, *Blaster Master*,

» Here's a look at the controversial AI-created artwork that Blaze is now planning to recommission.

» [Evercade] We've never experienced *Magic Purple* before so we're looking forward to it.

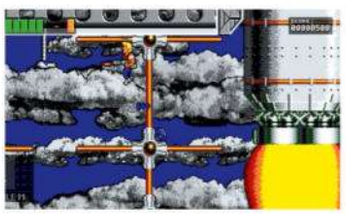
» Blaze announced an Atomic Edition of its VS console which included the *Duke Nukem* games for £119.99, but its 2,000 units sold out in days.

Blaster Master Boy, *Journey To Silius*, *Arabian* and *Mr Gimmick* form *Sunsoft Collection 1* and it's another interesting mix of curated oddities. While the likes of Sega, Konami and Taito are some of the more notable publishers that Blaze has yet to secure, it's good to see the cartridge range continuing to expand and it will hopefully lead to bigger names signing up. "It's very important not only to bring new content to the Evercade fanbase, but to also show others out there that Evercade's here to stay and a place where their games can also belong," Sean says.

The final announcements of the event generated the most interest and consisted of not one, but two *Duke Nukem* collections. "We're all fans of the franchise and our lead dev's passion project is creating a remastered version of the original games," Sean explains. "So we were delighted that Gearbox also shared that vision and we could licence them for this collection and bring an overview of *Duke Nukem* over the years. We're currently working on a native build of *Duke Nukem 3D* that is still in development, and we'll share more information in August."

Duke Nukem Collection 1 features the aforementioned native build of *Duke Nukem 3D* as well as remastered versions of *Duke Nukem I* and *II* which run at 60fps, have smooth scrolling, a re-recorded soundtrack, parallax backgrounds and widescreen support, as well as the option to play the original PC versions. *Duke Nukem Collection 2* features the PlayStation versions of *Time To Kill* and *Land Of The Babes* as well as *Duke Nukem Advance*.

» [Evercade] NES carts of *Mr Gimmick* can sell for nearly £1,000, so its inclusion on *Sunsoft Collection 1* is welcome.



» [Evercade] It's clear that a lot of work has gone into the remasters of *Duke Nukem I* and *II*.

The announcement was slightly marred by the later discovery that the artist commissioned by Blaze had used AI to create his new illustration, which led to Blaze issuing a statement on its official Twitter account by Andrew Byatt, Blaze's CEO. "We are immediately removing the art where possible to do so and will be announcing a replacement commission in due course that better meets the high standard expected."

Blaze still has reveals to make, with a second Showcase planned for July, but 2023 is already prove to be a bumper year for its Evercade systems.

TROUBLE FOR YUJI NAKA

The Abema Times reported that prosecuters were seeking two-and-a-half years in prison for the co-creator of *Sonic The Hedgehog* after he was convicted of insider trading. In addition to pleading guilty, Naka has also received two fines of ¥2.5 million and ¥175 million (nearly £1 million). Naka's defence is trying to lower his fine and get a suspended sentence ahead of final judgement which is expected on 07 July.

VANPOOL CLOSES

The Japanese developer behind such quirky fare as *Chibi-Robo! Zip Lash* and *Freshly-Picked Tingle's Rosy Rupeeland* has closed its doors. As well as creating the interesting *Dillon's* series on 3DS, its most recent projects had been several *Kirby* games for Nintendo, including *Kirby Fighters 2*, *Kirby And The Forgotten Land* and *Kirby's Return To Dreamland Deluxe*, which it co-developed with HAL Laboratory. No current reason has been given for the studio's closure.

Who is Iain Lee?
Iain Lee is a freelance counsellor who loves gaming, particularly retro gaming. You can get more information about Iain by visiting iainleecounselling.com or heading over to patreon.com/iainandKatherine

Can't buy me love

I had a lovely bank-holiday weekend in Liverpool. I'm 50 soon and a huge Beatles fan and I had never done the full-on Beatles tourist trip. So I booked a hotel, The Magical Mystery Tour and a few trips to The Cavern. What a weekend. I thoroughly recommend you do it. Once we had completed the tours (you only need to see Penny Lane once) I went for a stroll around town. I walked past a junk shop and then doubled back. Was there a tree growing in the middle of it? Yes there was.

I went in and started to feel very excited. It was what my dad would have called a 'toot shop'. Others would call it tat. To me, every overpriced and weird item was a treasure. A ventriloquist dummy with no lower jaw for £200? Yes please. Some glass eyes? Oh sure, why not.

As I was leaving, I saw a cabinet that was in a really awkward place. You had to squeeze through a tiny gap and twist your body to see what was in there. I'm glad I did because nestled in amongst the junk was a Dragon 32. You don't see those out in the wild too often. I've written in these pages before about how the Dragon was my first electronic love and I felt very nostalgic seeing it. I walked away reluctantly, I didn't need it. I couldn't afford the £125. I would never use it.

Knowing all of these things didn't stop me obsessing about it. Whilst in Liverpool and for days after I kept checking eBay. There were a few on there. Some at the ridiculous price of £399, several listed as 'untested' and going for around £50. I joined a delightful Dragon 32/64 page on Facebook. I wanted to know what hacks were out there for the machine. Turns out there are some. Not as many as there are for more popular machines, but there are some very clever people who have done some wonderful things for the machine. I was all set to go. Before I ordered though, I wanted to try an emulator. I found one online. Not quite as user-friendly as some of the others but it was OK. I 'played' a couple of *Star Trek* games, the Dragon version of *Pac-Man* and a few other games. They were bloody awful. Absolutely terrible.

And suddenly the spell was broken. I breathed a sigh of relief. I'd saved myself a couple of hundred quid and the disappointment of the machine arriving, being used once and then being stored in the garage (with the modded BBC). It's great looking back. Seeing the Dragon in the shop brought back some lovely memories. It was wonderful to be reminded of dad bringing it home, plugging it in for the first time and loading up our first game. The hours I spent locked in a tiny room playing the machine whilst it was connected to a black-and-white TV.

While I didn't take away the machine, I did learn that I don't need to buy the machine or even play the lousy games to be reminded of all those things. Those magical moments are always with me. I just need to tap into them. ✱

> "There are some very clever people who have done some wonderful things for the machine"

Do you agree with Iain's thoughts? Contact us at:

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Who is Paul Rose?
Paul is probably better known as Mr Biffo – the creator of legendary teletext games magazine *Digitiser*. These days, he mostly writes his videogame ramblings over at Digitiser2000.com. If you want more Biffo in your eyes, you can catch him as the host of *Digitizer The Show* at www.bit.ly/biffo2000.

Everything leads here

Nintendo has done it again. As I write this, I'm obsessed with *The Legend Of Zelda: Tears Of The Kingdom*. It's the kind of game that reminds me: a) how much I love games, b) that Nintendo – when it's on form – is still utterly peerless, and c) that all other games might as well give up and go home. There are moments in *Tears* that feel almost accidental, as if that world has been made for me and me alone. It's a testament to the potential of games themselves, and – for my money – the greatest example of the form up to this point. It really does feel, to me, that this is where everything was leading.

And yeah – all on a system that's almost old enough now to be considered retro. It comes at a time when games have never been more popular, yet so many of them seem almost embarrassed by what they are. Big-budget games too often strive to be movies. The reason HBO so perfectly translated *The Last Of Us* to TV was that *The Last Of Us* was so cinematic in the first place. Yes, there's gameplay, obviously, but sometimes it feels almost secondary to the story.

It's weird, though. Much as I love *The Last Of Us* (in both mediums), I've never really wanted videogames to be movies. I remember the excitement I felt when I first saw *Dragon's Lair* running at a local fair and the disappointment that followed when I actually played it. See also most of the Cinemaware games; *Defender Of The Crown* looked lovely, but it played like a one-legged dog.

I was but a perky-faced games journalist in the era when CD-ROM gave rise to the dreaded interactive movie. *Night Trap* may have achieved a cult following in the decades since its release, but it really isn't a good game. *The 7th Guest*, *Burn:Cycle*, *Sewer Shark*… it got worse when one of my favourite game studios – Sierra Online – turned its back on the traditional point-and-click and decided all its games needed to have FMV. I almost wept upon playing Daryl F Gates' *Police Quest: SWAT*.

> "Defender Of The Crown looked lovely, but it played like a one-legged dog"

Nintendo never, not even slightly, had any business with all that guff. Even when the company reluctantly embraced disc media with the GameCube, its games remained games. Its cutscenes have only ever been there to provide context for the gameplay.

Ironically, the *Zelda* series – of all Nintendo's franchises – has always been the closest I've ever experienced to a true 'interactive movie' precisely because of the freedom those games gave the player. *A Link To The Past* and the underrated *The Wind Waker* are so indelibly etched onto my memory because it felt like I was an active part of some epic adventure, rather than a bystander. I was immersed and embedded in ways no other game has ever achieved. They are things I did, rather than merely watched.

I'm not really expecting to see a whole bunch of *Tears Of The Kingdom* clones going forward. Nintendo has always been slightly removed from what the rest of the industry does, like a sort of mad scientist uncle who sits in the corner at family gatherings, making nuclear fission out of the potpourri.

Do you agree with Paul's thoughts? Contact us at:

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HOPE AND HOMES FOR CHILDREN

URGENT APPEAL

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» [PC] *Dynablaster* may actually be more familiar to you as *Bomberman*, which first debuted in 1983.

» President of BBG Entertainment Stephan Berendsen has big hopes for the publisher's new remakes.

BBG Entertainment

Stephan Berendsen on reviving popular retro titles – including Intellivision classics – for PCs and consoles

In 2021, BBG Entertainment released *Boulder Dash Deluxe* – a game which not only included 20 stages from the original game but 180 new ones. It achieved a score of 80% in issue 219 but now the company is back with not one, not two but three new retro revivals: a reimagination of *DynaBlaster* alongside fresh renditions of the Intellivision classics *Shark! Shark!* and *Astrosmash*. BBG Entertainment president Stephan Berendsen gives us the lowdown.

Hi Stephan. BBG Entertainment is no stranger to revisiting classic games, but what makes them attractive today?

Many of these early games feature great game design. Forty years ago, computers were very limited in terms of graphics and performance, so what mattered was a compelling game idea. These excellent game concepts still inspire today and that's the reason why we want to keep these games alive and provide new, modern, reimagined versions for current platforms, for players young and old.

» [PC] BBG's *Dynablaster* offers single-player sessions but it also has local and online multiplayer modes.

You worked on a 30th anniversary version of *Boulder Dash*. What do you need to consider when updating old games and what did you learn from the development of that game?

In the development of *Boulder Dash Deluxe*, we had to find a compromise to appeal to the old *Boulder Dash* fans and the younger generation that had never experienced the game before. It wasn't easy but, at Gamescom 2019, we had a *Boulder Dash* booth in the Retro area. Many young people who had never heard of the game before, played *Boulder Dash Deluxe* enthusiastically, which was wonderful to see. The real hardcore *Boulder Dash* fans would have liked to see more retro design (more old levels, original game engine and so on) but overall, they were pleased with the look and feel of the game, particularly its classic mechanics, which we stayed true to.

What then motivated BBG Entertainment to work on new versions of *DynaBlaster*, *Shark! Shark!* and *Astrosmash*?

We have been co-operating with Intellivision since 2019, and we were excited about the concept of its Amico console from the beginning. We decided to port our two games *Dynablaster* and *BrainDuel* (based on our *Einstein Brain Trainer*) to the Amico console

which are almost finished and, over time we built a very good relationship with the Intellivision team. Of the other Intellivison Amico games, *Astrosmash* and *Shark! Shark!* excited us.

> "Intellivision understood how passionate we were about these IPs"
>
> **STEPHAN BERENDSEN**

DynaBlaster (or _Bomberman_) has been around since 1983 and it has had numerous updates and revamps since then. What will make your version special – what new features can we expect?

We developed our first *Dynablaster* version in 2013 for iOS and Android. We were limited on the mobile platforms at that time but we finally started developing a completely new *Dynablaster* version for PC and consoles in late 2021. This new version features very good 3D and high-resolution graphics, many new game elements such as power-ups, which really adds a new dimension to the gameplay, and a very performant local and online multiplayer. There is also a brand new co-op mode for couch play.

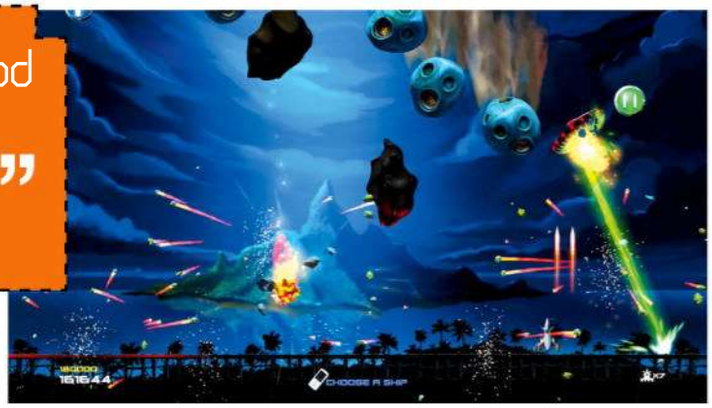
Was it easy to strike a deal with Intellivision for _Astrosmash_ and _Shark! Shark!_?

Negotiations took a long time but Intellivision understood how passionate we were about these IPs. This passion combined with the relationship we had built with Intellivision over the years, allowed us to strike a deal that worked for everyone.

Can you tell us what readers can expect from your new update of _Shark! Shark!_?

The original 40+ year-old *Shark! Shark!* captivates with a unique game concept and our new version builds on this captivating game idea. The new *Shark! Shark!* version is a complete new development with many new game elements and creatures, updated graphics, great music and sounds, joystick/control as well as local and online multiplayer with up to four players. All of this is available for modern platforms like Switch, Xbox and Steam.

The original Intellivision versions are also being included. How faithful will they be – will you even retain the bugs in _Shark! Shark!_?



» [PC] The new version of *Astrosmash* features brand-new up-to-date graphics.

» [Intellivision] Stephan is confident *Astrosmash*'s focus on high scores will feature in the remake.

» [Intellivision] Mattel's popular fixed shooter *Astrosmash* was released in 1981.

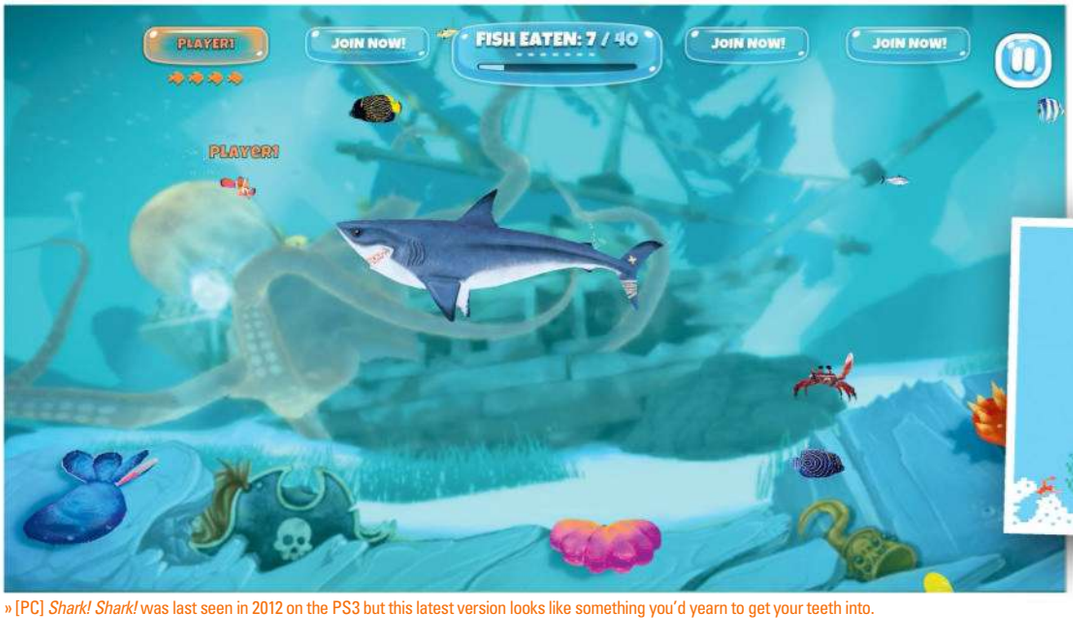
We are being extremely faithful to the original version of *Shark! Shark!*. But the new version is a complete new development with modern development tools, for modern consoles, so players won't have to worry about flickering graphics. More will be unveiled soon.

Astrosmash was a hit among those seeking high scores. Will this be integral to the new experience?

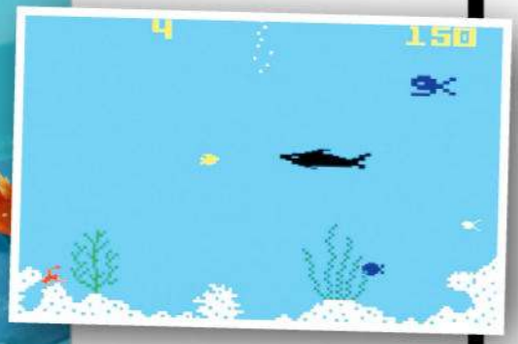
Yes. Just like the original *Astrosmash*, the new, reimagined experience will motivate those seeking high scores. We will announce more specifics on what players can expect, particularly those high-score hunters, very soon.

What else can we expect?

Next year, *Boulder Dash* will turn 40. In celebration, we currently have a brand-new version of *Boulder Dash* in development, which will be released next year. We are already working closely with the *Boulder Dash* community on this new experience, which will, for sure, be the best version of *Boulder Dash* ever created. We can't wait to deliver this to core fans and introduce the ultimate version of the game to a new generation of players.

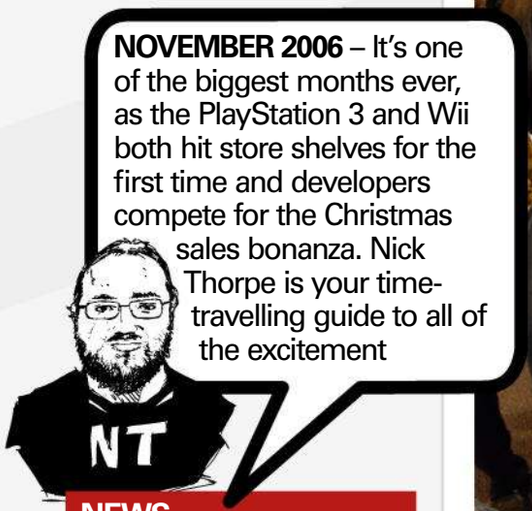


» [PC] *Shark! Shark!* was last seen in 2012 on the PS3 but this latest version looks like something you'd yearn to get your teeth into.



» [Intellivision] The original version of *Shark! Shark!* was created by Don Daglow and released in 1982.

BACK TO THE NOUGHTIES



NOVEMBER 2006 – It's one of the biggest months ever, as the PlayStation 3 and Wii both hit store shelves for the first time and developers compete for the Christmas sales bonanza. Nick Thorpe is your time-travelling guide to all of the excitement

» Happy shoppers pick up the Wii, and hopefully *Excite Truck* too. That game is great.

NEWS NOVEMBER 2006

Alexander Litvinenko, a former officer of the FSB security service in Russia, was poisoned in London on 1 November. Large amounts of the radioactive element polonium-210 were found in his body and he eventually passed away on 23 November, after accusing Russian president Vladimir Putin of ordering his death. A UK inquiry and later European Court Of Human Rights case found beyond reasonable doubt that former KGB agents Andrey Lugovoy and Dmitry Kovtun killed Litvinenko.

On 16 November, Nobel Prize winning American economist Milton Friedman passed away at the age of 94. During his career, he rejected the theories of John Maynard Keynes which favoured state intervention in the economy, in favour of a free market philosophy with limited government involvement. Friedman's ideas were a major influence on the policies of Margaret Thatcher's government, and he was an advisor to US president Ronald Reagan.

Former NFL safety Andre Waters died via suicide on 20 November, at the age of 44. Postmortem examinations of his brain tissue revealed chronic traumatic encephalopathy, likely sustained due to various concussions during his sporting career, with Dr Bennet Omalu of the University Of Pittsburgh believing that this damage was a primary cause of Waters' depression.

THE LATEST NEWS FROM NOVEMBER 2006

The PlayStation 3 launched in Japan on 11 November, and the initial response to the system was odd. 81,639 systems were sold in the first two days, with 45,774 being the more expensive 60GB model, but only 66,684 games were sold – meaning almost 15,000 players went home with nothing to play, leading to speculation that many systems were being picked up by scalpers for resale online. *Ridge Racer 7* narrowly beat *Mobile Suit Gundam: Target In Sight* to become the most popular launch game, selling 21,654 copies. The North American launch followed on 17 November, with 197,000 consoles sold by the end of the month – just shy of half the number Sony had promised for the launch.

The Wii launched in North America on 19 November, and also faced supply issues as a million units had initially been expected to be available. Despite this, Nintendo claimed that the first week hardware sales totalled over 600,000 units, making for its best launch ever, and *The Legend Of Zelda: Twilight Princess* was unquestionably the most popular game with 454,000 copies sold. As always, import impressions from the UK press would have to wait until later.

» [Xbox 360] Glorious destruction awaits those who take up the *Just Cause* challenge.

You'd expect that the Xbox 360 would need a strong month to counter the new arrivals, but there actually wasn't a lot going on. Although a belated port of *The Godfather* received a moderately warm reception, it was *Bomberman Act: Zero* that drew more attention, for all the wrong reasons. The gritty reboot was reviled, earning 4/10 from *X-360*, 3/10 from *Official Xbox 360 Magazine* and 3/10 from *Edge*, with *Edge* saying that the developers "failed to understand either the appeal of the series

or the preferences of Western gaming audiences".

The big release of the month across Xbox 360, PS2, Xbox and PC was *Just Cause*, an open-world action game from Ubisoft. An 8/10 review from *games™* remarked that the game's biggest achievement was being, "An open, vehicle-based videogame that does not feel like *GTA* in any way, shape or form, be it thematically or mechanically." *PC Gamer* gave it 85%, saying that it was "one big exaggeration topped off with an exclamation mark that's on fire". *Edge* wasn't quite as impressed but still felt that the game offered "an unparalleled sense of freedom that can be enjoyed just as easily as it can be criticised" and gave it 7/10. *Play* also scored it 82%.

On the PC, Introversion's minimalist nuclear strategy game *Defcon* scored 9/10 in *games™*, "The terrifying final analysis at the Game Over screen is only topped by the very real fear that the leader of the free world is looking at a map very similar to Defcon's, pointing somewhere around the Middle East and muttering 'eeny meeny miney mo.'" *Edge* noted that the interface was "Wargames' WOPR in all but name" in a 7/10 review, and *PC Gamer*'s 87% review praised the way it leaves "your mind bristling with ideas for new atrocities to engineer", and also noted the low price of £10.

» [PC] It's probably best not to think about the potential for nuclear war right now.

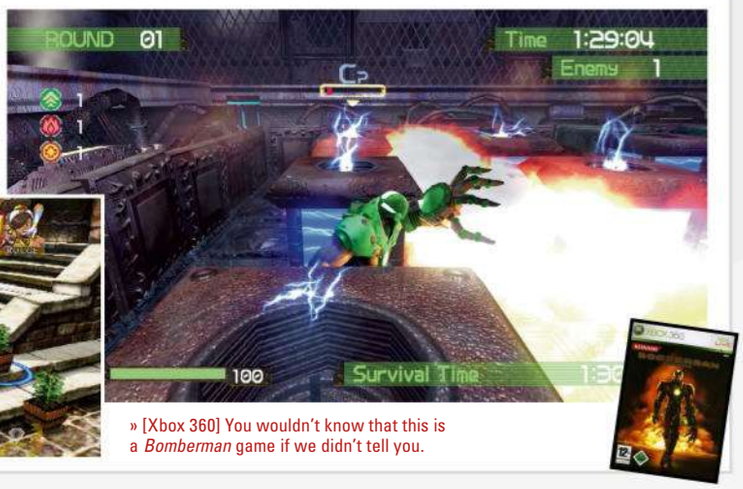
» [PSP] *Ridge Racer 2* was fantastic, but only if you hadn't bought the first game.

It was a relatively quiet month on the older consoles, with nothing of note going on in Nintendo's neck of the woods. The highlight for PS2 owners was *Metal Gear Solid 3: Subsistence* (9/10 *Official PlayStation 2 Magazine*, 94% *Play*), an upgraded version of Konami's stealth classic. On the PSP, the big game of the month was *Ridge Racer 2*, earning 7/10 in *Edge*, 78% in *Play* and 8/10 in the *Official PlayStation 2 Magazine*. *Play* noted that its score would have been "considerably higher" if the original *Ridge Racer*, from which *Ridge Racer 2* drew most of its content, didn't exist. *Edge* was particularly annoyed by the game's "complete failure to reward veterans by recognising their saves".

The final highlight of the month was *Power Stone Collection*, a PSP bundle of Capcom's unconventional fighting games. *Play*'s 88% review highlighted the inclusion of the VMU minigames from the Dreamcast version, saying that "it symbolises how much effort has gone into this compilation". Although *games™* felt that *Power Stone 2*'s four-player action was "frequently frustrating and inaccessible" on the small screen, it still awarded a score of 8/10, urging readers "please give *Power Stone* a chance".

Join us again next time, when Nintendo attempts to win over gamers in fair old Blighty with its brand-new Wii.

» [PSP] Everyone loves *Power Stone*. Well, enlightened Dreamcast owners love *Power Stone*, and you should too.



» [Xbox 360] You wouldn't know that this is a *Bomberman* game if we didn't tell you.

CHARTS

NOVEMBER 2006

PLAYSTATION 2

1 – **Cars** (THQ)
2 – **Reservoir Dogs** (Eidos)
3 – **Pirates Of The Caribbean: The Legend Of Jack Sparrow** (Ubisoft)
4 – **Formula One 06** (Sony)
5 – **The Godfather** (EA)

XBOX 360

1 – **Prey** (2K Games)
2 – **The Lord Of The Rings: The Battle For Middle-Earth II** (EA)
3 – **Rockstar Table Tennis** (Rockstar)
4 – **Chromehounds** (Sega)
5 – **Over G Fighters** (Ubisoft)

PC

1 – **The Sims** 2 (EA)
2 – **The Lord Of The Rings: The Battle For Middle-Earth II** (EA)
3 – **The Sims 2: Open For Business** (EA)
4 – **Football Manager 2006** (Sega)
5 – **Star Wars: Empire At War** (Activision)

MUSIC

1 – **The Rose** (Westlife)
2 – **The Saints Are Coming** (U2 & Green Day)
3 – **Rock Steady** (All Saints)
4 – **Put Your Hands Up For Detroit** (Fedde Le Grand)
5 – **Irreplaceable** (Beyonce)

THIS MONTH IN...

Nintendo: The Official Magazine

PS3 delays have pleased reader Dan Parks, who says, "I'm not console-bashing or anything, I just think it would be better for everyone if Nintendo and Microsoft had a more even share of the market."

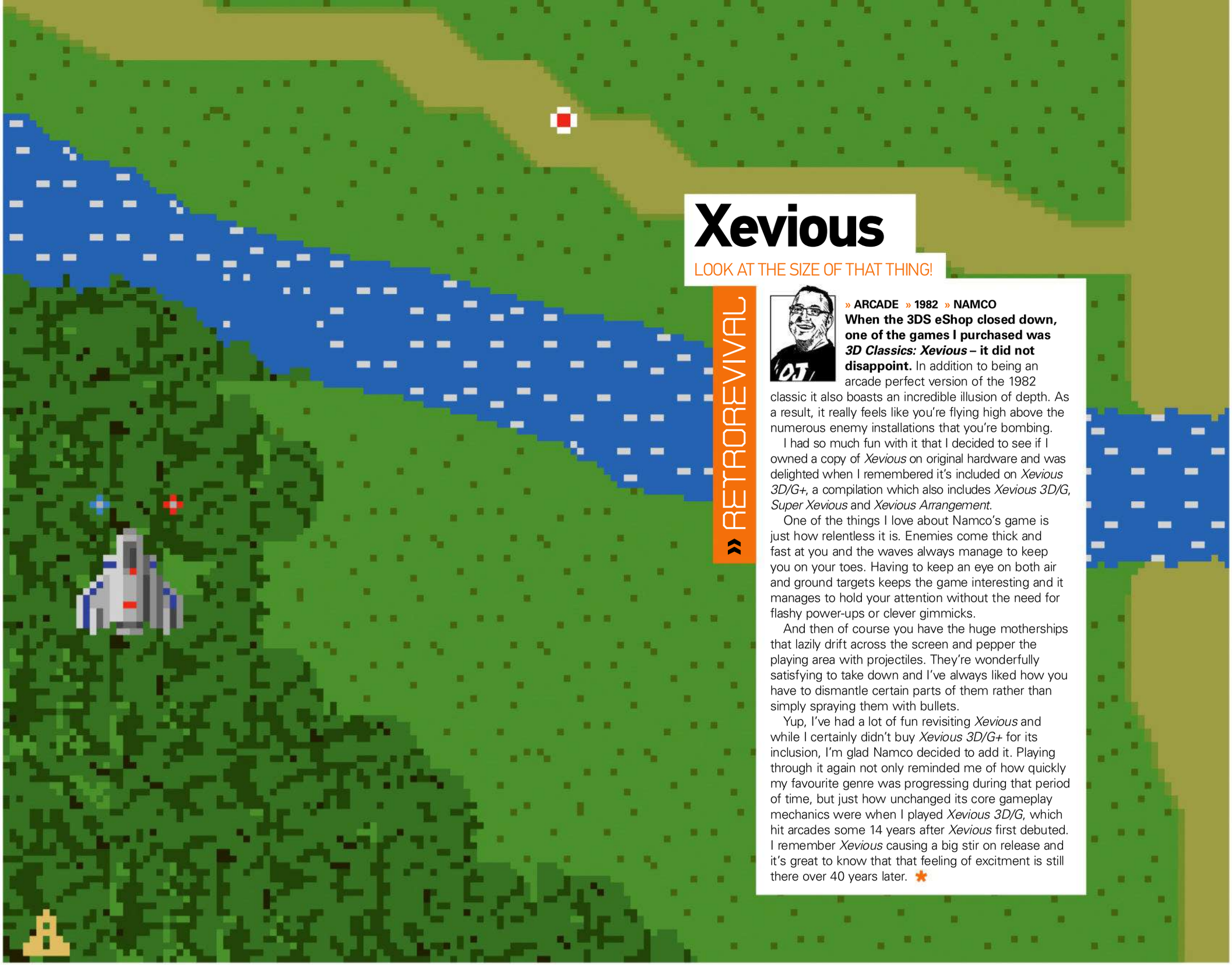
PC Gamer

"The graphics are pretty good, but Willis' quips are much better," the mag says about Crytek's fictional movie tie-in *Cry Hard*. "If you quip fast enough, the AI begins to sulk, which leads to overheating on older PCs."

Official Xbox 360 Magazine

"Konami released two very old shoot-'em-ups on Xbox Live Arcade last month, damaging its reputation in the process." Apparently, *Scramble* and *Time Pilot* are "truly awful" and "early Eighties tat".

HIGH SCORE
22380



Xevious

LOOK AT THE SIZE OF THAT THING!

» RETROREVIVAL

» ARCADE » 1982 » NAMCO

When the 3DS eShop closed down, one of the games I purchased was *3D Classics: Xevious* – it did not disappoint. In addition to being an arcade perfect version of the 1982 classic it also boasts an incredible illusion of depth. As a result, it really feels like you're flying high above the numerous enemy installations that you're bombing.

I had so much fun with it that I decided to see if I owned a copy of *Xevious* on original hardware and was delighted when I remembered it's included on *Xevious 3D/G+*, a compilation which also includes *Xevious 3D/G*, *Super Xevious* and *Xevious Arrangement*.

One of the things I love about Namco's game is just how relentless it is. Enemies come thick and fast at you and the waves always manage to keep you on your toes. Having to keep an eye on both air and ground targets keeps the game interesting and it manages to hold your attention without the need for flashy power-ups or clever gimmicks.

And then of course you have the huge motherships that lazily drift across the screen and pepper the playing area with projectiles. They're wonderfully satisfying to take down and I've always liked how you have to dismantle certain parts of them rather than simply spraying them with bullets.

Yup, I've had a lot of fun revisiting *Xevious* and while I certainly didn't buy *Xevious 3D/G+* for its inclusion, I'm glad Namco decided to add it. Playing through it again not only reminded me of how quickly my favourite genre was progressing during that period of time, but just how unchanged its core gameplay mechanics were when I played *Xevious 3D/G*, which hit arcades some 14 years after *Xevious* first debuted. I remember *Xevious* causing a big stir on release and it's great to know that that feeling of excitment is still there over 40 years later.

INSIDE THE Nintendo ENTERTAINMENT SYSTEM

FOR MANY PLAYERS, NINTENDO'S 8-BIT HARDWARE WAS THE DEFINING CONSOLE OF ITS GENERATION. WE SPEAK TO NES DEVELOPMENT VETERANS ABOUT DEVELOPING THE GAMES MILLIONS GREW UP WITH, AND FIND OUT HOW A NEW GENERATION OF CODERS DEVELOP FOR THE SYSTEM TODAY

WORDS BY NICK THORPE

The Nintendo Entertainment System, and its Japanese counterpart the Famicom, need no introduction – if you're reading this magazine, you'll know that the 8-bit hardware catapulted Nintendo to a position of global leadership in the videogame business, and hosted the first iterations of countless classic series. Though marketing played an important role in this commercial and cultural success, it wouldn't have been possible without the hardware. After all, the ColecoVision and the Atari 5200 were less than a year old when the Famicom launched in Japan in 1983, and the 3DO and Atari Jaguar were on the market by the time developers finally abandoned the NES in 1994. A machine simply can't stay relevant for that long without hardware that's flexible enough and capable enough to keep up with the changing tastes of gamers. But the NES wasn't just a titan of its time – plenty of developers are creating new games for the hardware, pushing it harder than ever with modern development tools.

Two CPUs and their derivatives dominated the home hardware scene of the Eighties – the Zilog Z80, as seen in the ZX Spectrum, ColecoVision and Master System, and the MOS Technology 6502, which featured in the Atari 5200, Apple II and Commodore 64. Nintendo's engineer Masayuki Uemura opted for the 6502 for the NES, primarily because it was small enough that a chip could also include sound capabilities. In 2016, the late engineer told **Retro Gamer** that this choice caused "a huge problem within the company" as Nintendo's hit arcade game *Donkey Kong* had used a Z80 and the source code couldn't be reused. Consideration for any programmers outside of Nintendo wasn't a priority, as the company didn't initially intend for third-party publishers to be part of its business model.

Of course, the success of the hardware in Japan and North America eventually necessitated third-party development just to keep up with demand for new games. The system didn't have the same impact in the UK, which is why programmer Paul Machacek didn't encounter one until 1988, when he joined Rare – one of the few UK developers to concentrate on Nintendo's system. His previously published games had been written for Z80-based computers, and he was initially tasked with writing for the Z80-based RAZZ arcade board, but he was soon asked to work on a NES project. Fortunately, Paul was familiar with 6502 assembly code from his time as an Oric-1 owner. "I picked it up pretty quickly again," he says, "but forgot about all the number juggling you did on it compared to the Z80 as 6502 has so few registers, but alternatively had the fast zero-page storage."

The development environment that Paul worked with was rather basic. "Originally at Rare everyone used PDS (Programmers Development System) which was a text editor and code assembler. We had home-built interface cards that plugged into the

» It might look rather unassuming, but there was a lot going on under the NES' exterior and many developers took advantage of that.

PAUL MACHACEK
RARE

KEVIN BAYLISS
PLAYTONIC, FORMERLY RARE

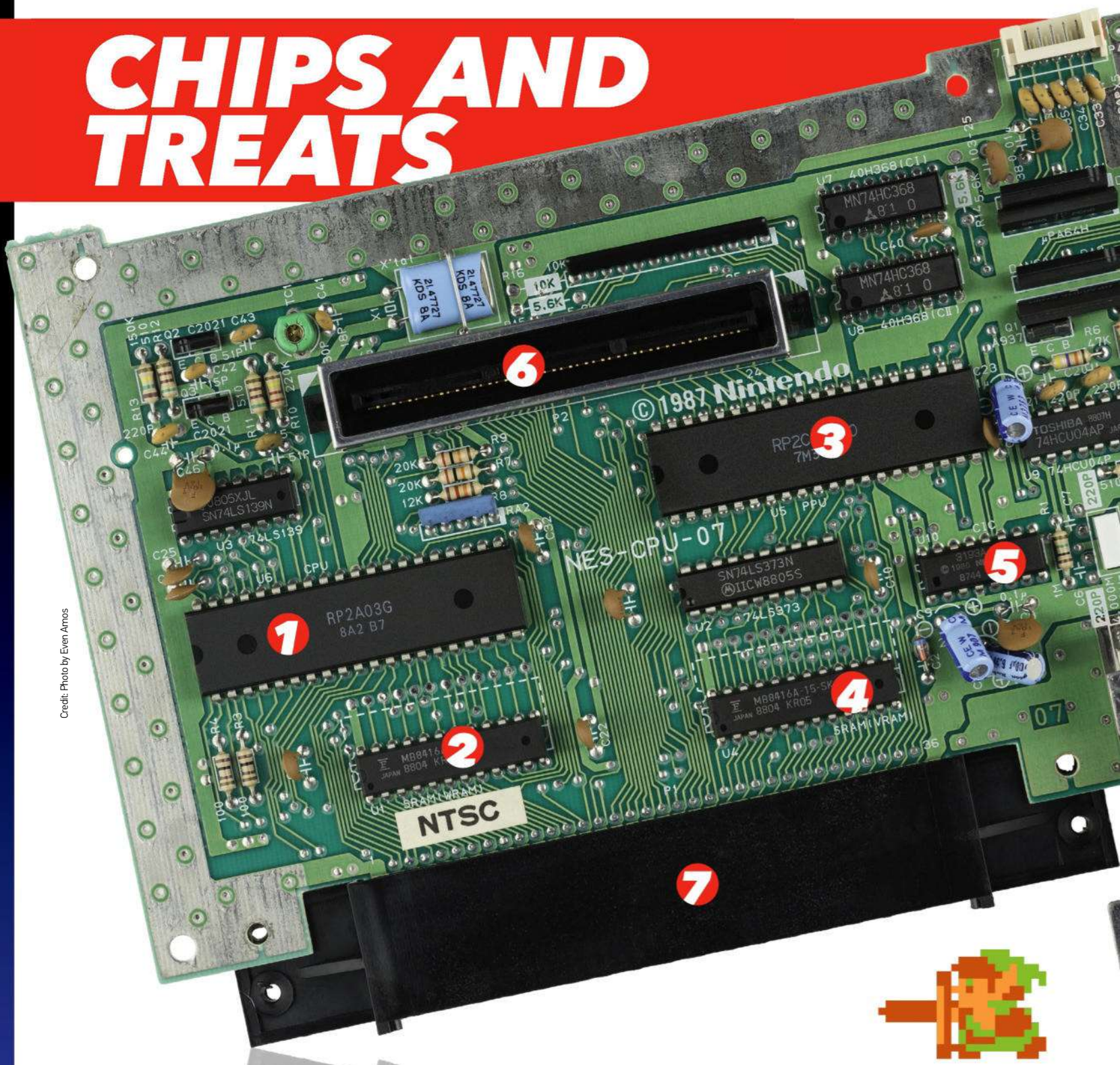
JAMES DEIGHAN
MEGA CAT STUDIOS

NIÇOLAS BÉTOUX
MORPHCAT GAMES

JULIUS RIECKE
MORPHCAT GAMES

MIKAEL FORSLIND
ELDEN PIXELS

CHIPS AND TREATS



Credit: Photo by Even Amos

1 The 2A03 chip serves as both the 6502 CPU and sound generator for the NES, and was manufactured by Ricoh. In PAL consoles, this is the 2A07 instead.

2 This chip is the system's main work RAM – a rather tiny 2KB, which is fortunately enough, paired with the rather speedy data transfer of the NES's ROM cartridges.

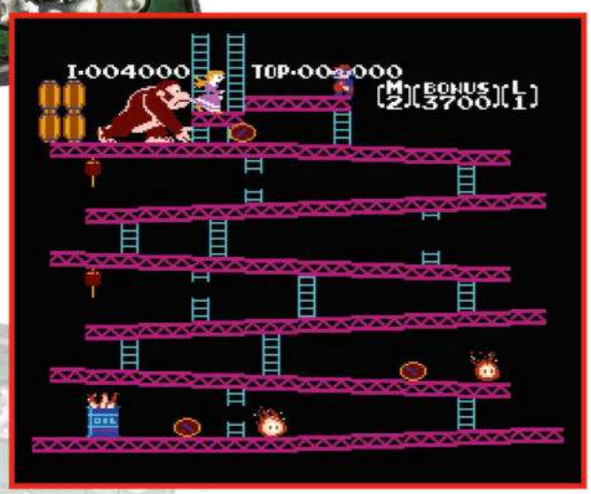
3 The 2C02 is a custom chip by Ricoh, the Picture Processing Unit. It's responsible for the advanced graphical features that the NES offered over the competition.

4 This part of the board is where you will find the RAM for the PPU. Just as with the CPU, this is a rather small 2KB chip that doesn't allow for much more than the bare minimum.

5 This is the 10NES, the infamous lockout chip for Nintendo's 8-bit console. You can find out more information about this chip by reading Protection Racket on page 27.

6 Here's the expansion port – a feature that allowed for the potential to connect devices like a floppy disk drive. However, it never saw any real-world use.

A LOOK AT THE KEY COMPONENTS ON THE NES MOTHERBOARD



» [NES] Creating a good home version of *Donkey Kong* was a priority for Nintendo in 1983.

7 This is the cartridge connector, which can actually be pulled free from the motherboard. A design flaw means these often fail with age and need to be replaced.

cartridge slot on the NES, and they were attached by a ribbon cable to our PCs that ran PDS," he explains. "We had no network. The PCs were Amstrads with 20MB (not a typo) hard disks. Every time you assembled your code – it was all done in one go, we didn't have linkers yet – the full binary would copy over the ribbon cable to the interface card and you'd run your code on the target machine. As for documentation we just had the standard NES manual, which had a few typos in that needed to be corrected otherwise things wouldn't work, and also your handy 6502 instruction set guide for occasional reference, especially if you wanted to write self-modifying code."

If you're a programmer wincing at that, it gets worse. "There were no debug tools as you'd know them today," Paul continues. "There were tricks for finding out where your code got to before things went wrong, like writing values into a memory location and seeing which one was written last before it crashed, then using a bisector search to narrow down to the offending code. For performance testing you normally had some visual change on the screen (offset a screen horizontal scroll register, or alter a colour palette) at the start of a function, and then reset it at the end so that you could 'measure' how long it took on-screen by drawing marks with marker pens around this visible indicator, and seeing if the marks got closer together as you continued to optimise your code. Yes folks, these were the days you measured code performance in inches!"

That sounds like a fairly awkward way to work, but Paul just sees it as a product of the circumstances at the time. "We did what we had to do back in the day. Folks, go back 35 years, develop what we did with the tools that we had on the systems that we used and tell me you wouldn't end up doing something similar!" Fortunately, this situation would eventually improve for Paul and his colleagues. "After a few years Rare contracted Jon Ritman, a close associate, to write a new system called GLAM [Global Language Assembler Monitor] to replace PDS. GLAM could target a wider variety of processors and had a linker as well as assembler so you didn't have to assemble your entire codebase every single time you changed anything, which speeded up development. GLAM worked really well."

> "DEVELOP WHAT WE DID WITH THE TOOLS THAT WE HAD ON THE SYSTEMS THAT WE USED AND TELL ME YOU WOULDN'T END UP DOING SOMETHING SIMILAR!"
> **PAUL MACHACEK**

Ultimately, 6502 programming wasn't a big problem for Paul in transitioning to a new platform. "For me the larger adjustment was going from home computers with bit-mapped screens, to the character-mapped system of the NES, with separate colour palette designations, character banks (and swapping) and memory bank-swapping on the carts," he remembers. Nintendo's Picture Processing Unit – PPU for short – was a custom design by Ricoh, and according to Nicolas Bétoux of Morphcat Games, "Compared to other hardware of that time, the graphics and scrolling capabilities were great."

Indeed, when the Famicom launched in 1983, its closest competitor in Japan was Sega's SG-1000. The Famicom's graphical capabilities were clearly superior – it had a palette of over 50 colours compared to just 16 on Sega's system, sprites could have three colours each as opposed to just one, and screens could be scrolled on a per-pixel rather than per-character basis, resulting in a considerably smoother look. Nintendo's hardware could also display more sprites overall, and more sprites per scanline. Sega introduced the graphically superior Mark III hardware in 1985, meaning that competition took place on a more even footing by the time the NES and Master System made it to international audiences.

While Nintendo's 8-bit hardware had advanced graphical capabilities, the methods used to create those graphics were anything but advanced. Like Paul, artist Kevin Bayliss had never encountered a NES before creating games for the system. "On my first day at Rare, Tim [Stamper] showed me the basic 'pixelation process' and taught me how to create work that could actually be put into a game," he tells us. "I had to basically draw my artwork and place it beneath a grid sheet on

» [NES] In Japan, edited *Excitebike* tracks could be saved to audio cassettes.

» [NES] The large characters of *Creepy Brawlers* were the most challenging task Mega Cat Studios has attempted.

» [NES] *Super Mario Bros* was considered the limit of what the basic NROM mapper could do.

» [NES] *Gradius* was one of the earlier games to go beyond the basic NROM mapper.

a large drawing board filled with fluorescent strips. I'd then trace over my drawing by using the grid to define pixels with a pencil, and then I'd use felt pens to fill out the pixels. Then the work had be organised and split into boxes (8x8 sprites) and the sprite data and position data all had to be worked out in hexadecimal, in my head. This was pretty easy but a bit laborious at times, and you often didn't want to do this job because it wasn't at all creative. You just wanted to see your work in the game."

If you're baffled by the lack of a computer in that process, you're not misunderstanding anything. "There were *no* tools other than the pen, pencil, paper and a surgical scalpel for scribbling out your mistakes on the tracing paper when you put a pixel in the wrong place, or wanted to chop pixels off a character to allow it to squeeze into less data," Kevin clarifies. "There was a simple sprite editor that Mark Betteridge wrote but this wasn't really used because it was very limited and didn't allow you to view your animation (as they do in all of the old Disney 'behind-the-scenes' footage – by flipping your paper back and forth to create the illusion of animation)."

Since NES development tools weren't standardised, a variety of different art tools were used by different companies. Nintendo did use hand-drawn sprites at one point, but eventually created a mouse-driven pixel-art tool, while Namco had a sprite-editing tool that did have the animation preview facility that Kevin describes. However, he enjoyed the low-tech approach employed at Rare. "It was actually quite nice to have a limited palette. I mean, there's no way you could have drawn all of your graphics on paper for any 16-bit console because you'd never have enough pens, and it would have taken all day to decode – and you would have made so many mistakes – it would have been impossible," he says. "But due to the simplicity of the colour palette and the low resolution and small number of sprites that we mostly dealt with, making graphics on paper was actually quite fun and felt a lot more 'organic' than creating them digitally on the SNES, so I guess there's something to be said for that."

No matter how a developer created art for the NES, technical limitations played their part in the final results. "Sprites per line (more than 64 filled pixels in a horizontal scanline) were a problem so you'd try not to make characters very wide," Kevin explains. For instance, in particular I remember all of the characters for the *WWF* games I did had to either 'fall back' or 'lie on the ground' and of course that meant that they'd be quite wide in that pose. So you'd often try to angle them or be clever with the pose, but you'd never really avoid it. You can see how the characters often flash on and off particularly in beat-'em-up games like that, and

DISK-O INFERNO

WHAT HAPPENED WHEN NINTENDO SWAPPED CARTRIDGES FOR FLOPPY DISKS?

Credit: Photo by Evan Amos

By the time the NES was receiving its test launch in the USA, Japanese developers were reaching the limits of what they could achieve with the basic Famicom cartridge, which offered a mere 32KB of program data and 8KB of graphics data. Nintendo looked to the home-computer market to solve the problem, and decided that floppy disks were cheap to manufacture and offered a number of advantages for both players and developers.

The Famicom Disk System utilised double-sided floppy disks with a relatively large total capacity of 112KB. Hardware interfaced with the Famicom via the cartridge slot, and featured 32KB of program cache RAM and 8KB of RAM for graphics, as well as an additional wavetable-lookup synthesis sound chip. The benefits of that extra sound hardware can be heard when comparing Famicom Disk System games like *The Legend Of Zelda* to their international ROM cartridge counterparts. The rewritable disks allowed players to save their data, and by using special kiosks in stores they could even write whole new games to the disks for a discounted price. Nintendo pushed the new format hard, releasing its first-party games exclusively on the Famicom Disk System during 1986 and most of 1987.

As is often the case with add-on technology, the high initial price of ¥15,000 put players off, but that wasn't the only problem – floppy disks proved to be slower to load, more fragile and even easier to pirate than cartridges. Although some third parties such as Konami got on board, the likes of Namco, Capcom and Hudson Soft preferred to stick to cartridge releases. But the biggest issue was that by including bank-switching chips on board, the storage limitations of cartridges could be overcome and additional features could be added to games, whereas the Famicom Disk System spec was totally fixed.

Sales of the Famicom Disk System stalled after a strong first year, and beginning in 1988 Nintendo reverted to ROM cartridges as the media for its major games such as *Super Mario Bros 3*, *Mother* and *Fire Emblem*. Plans for an equivalent device for the NES had been announced in early 1986, with a projected launch of Christmas that year. However, these plans were never realised and by mid-1987 they were obsolete as notable games that had launched as disks in Japan reached the NES in cartridge form, including *Metroid*, *The Legend Of Zelda* and *Castlevania*.

it was a problem all companies had to deal with as best they could." That characteristic flickering is actually a clever programming workaround – the NES would simply skip pixels if too many sprites were displayed, so rapidly cycling sprites on and off at least ensured they'd all be displayed in some form.

In fact, NES developers often had to get creative to realise their visions – such as the huge boss characters Kevin drew for *Cobra Triangle*.

"With *Cobra Triangle* we were lucky because the game took place in an isometric environment, so all the graphics were viewed from an angle which reduced the amount of width that you'd normally see in a horizontally scrolling game," he says. "The boss characters were all a collection of large sprites and we could use the surface of the water to make things appear submerged by adding a few 'ripple' sprites around them at the base. So for instance the sea monster (Nessie) character I created was quite tall, and the humps behind her moved around independently, and because of the angle, there wasn't very much in the way of sprite flickering."

> THERE WERE NO TOOLS OTHER THAN THE PEN, PENCIL, PAPER AND A SURGICAL SCALPEL FOR SCRIBBLING OUT YOUR MISTAKES
>
> **KEVIN BAYLISS**

The limitations became more difficult to deal with when developing licensed games, as Rare often did. "For *WWF* wrestling games we had to make sure there was a good likeness with the characters. So it was hard to 'digitise' the photographs by hand and reproduce the characteristics of everyone accurately when you had only got about 16x16 pixels for a character headshot on the select page," says Kevin. "I remember getting these awful quality faxes with pictures of the wrestlers on and I was supposed to try and recreate them using such low resolution and three colours." This did lead to some funny experiences, though. "A lot of the time I'd get faxes back from America saying that, 'The graphics were in need of some attention,' because the likeness wasn't quite close enough," Kevin continues. "Then I'd change like, one pixel and then I'd get a fax back the next day saying that the image was much better. It really made me laugh

PICTURE IN PROCESS

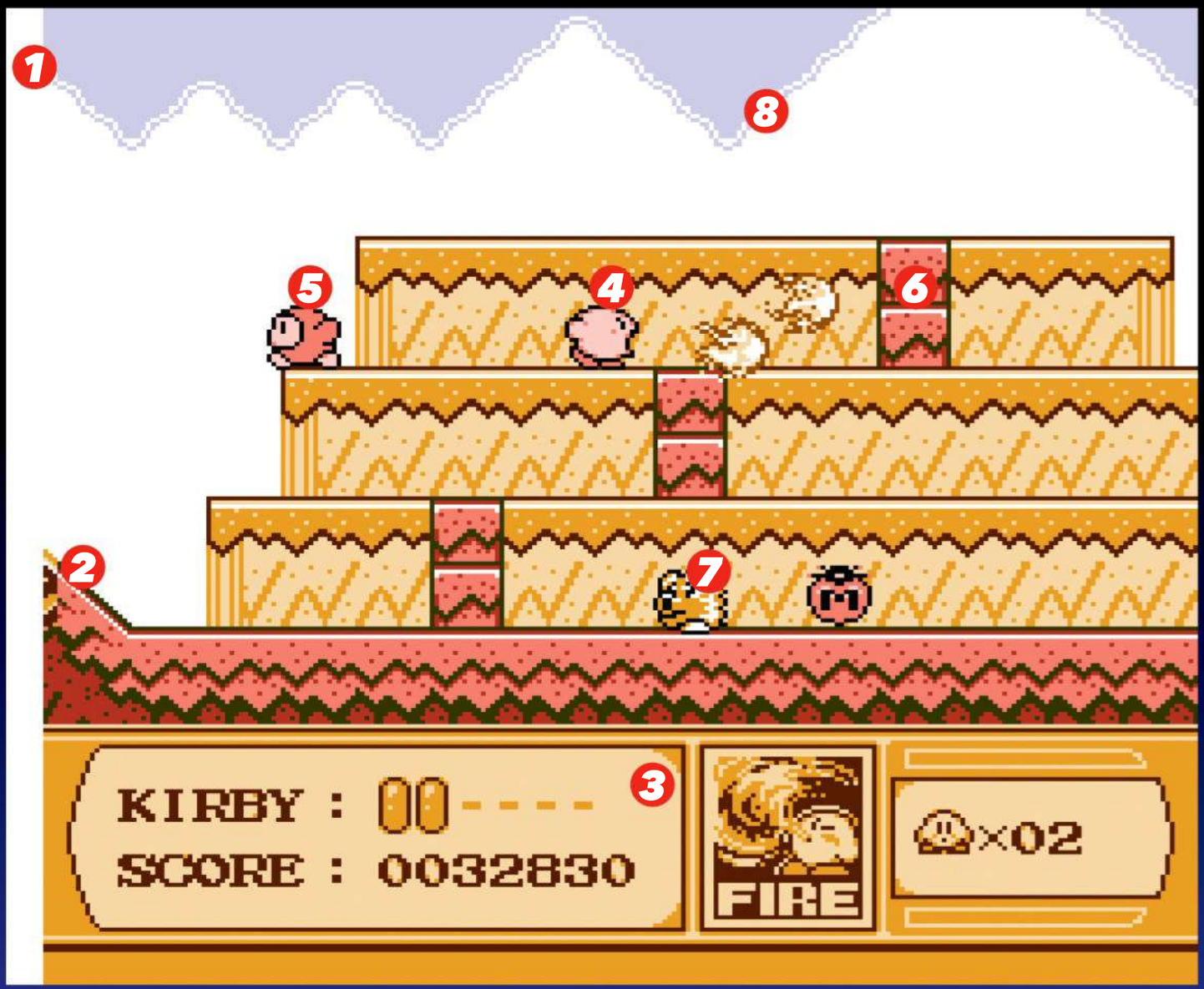
WHAT MAKES UP A NES GAME SCREEN?

1 If a game scrolls both horizontally and vertically, the limited graphical RAM of the NES means tiles can't be drawn in ahead of the current screen position. This border helps to mask glitches caused by this quirk.

2 Although background tiles are 8x8 pixels, 16x16 areas must use the same colour palette. Here, you can see that the leftmost 16x16 grid has taken on the colour attributes from the tiles loading in on the right.

3 *Kirby's Adventure* takes advantage of the MMC3 chip's interrupt request feature to draw this status bar at the bottom of the screen. Reducing the vertical display area ensures a lack of scrolling glitches.

4 NES sprites are limited to four colours, though the need for a transparency marker normally drops that to just three – in Kirby's case, black and two shades of pink. Needless to say, clever art design can work wonders.



5 Economical use of colour palettes is important on the NES as the system can only define four sprite palettes at once. For that reason, the Waddle Dee here uses exactly the same colours as Kirby.

6 Background tiles can use one of four three-colour palettes, plus a universal background colour. They don't count towards the system's sprite-drawing limit, so are often used for less-animated game objects.

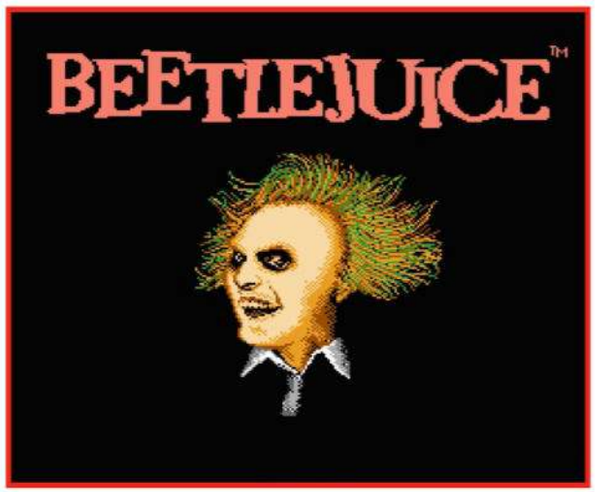
7 Although it blends with the background just as well as Kirby's fireballs, this enemy can't use a background palette and actually uses a distinct sprite palette of its own.

8 Like most systems of its era, the NES can only display a single layer of background graphics. However, the hardware's smooth per-pixel scrolling was a big advantage over rival machines.

when that happened. Also, when I worked on the *Beetlejuice* game, I had the opposite problem, and my title page artwork looked too much like Michael Keaton apparently, and so I had to do it again to make it look more like Beetlejuice – kind of difficult when they're the same person."

Sometimes, it was possible to push the system beyond its theoretical limits. "If you look at *Super Off Road*, you'll notice there are more colours on-screen at times than the hardware can handle as standard," says Paul. "There were four palettes of four colours each, but the first colour in each palette was the same background colour for all. So the total number of colours you could display for background characters was 13. There are more displayed on *Super Off Road* because I changed the palettes with carefully timed access to VRAM during horizontal blanking. This worked fine," Paul explains, before correcting himself. "Well, it did on the US version of the NES. When the game was finished, I was informed it would be released in Japan on the Famicom, which was slightly different in terms of hardware and unfortunately my colour switching wouldn't work on that, so I believe it was not released there."

Audio was handled by the same Ricoh 2A03 chip that contained the CPU. "On the NES, you've got four audio channels to work with. We don't count the DPCM (sample) channel, we don't use it as it has some drawbacks," says Nicolas, a developer of modern NES games. "Either way, that's two square wave generators, one triangle wave which is often used for bass lines and one noise channel used for percussive sounds. So you see, there are limited options for polyphony and timbre, which makes it difficult to create a more atmospheric soundtrack the likes of which you'd hear in modern games. Likely, that is one reason why a lot of game soundtracks back in the day made up for it with dynamic compositions and catchy melodies."



» [NES] Here's Kevin's Beetlejuice – or is it Michael Keaton? It could in fact be both.

NES audio has some particularly distinctive characteristics, not least the triangle waves which are stair-stepped rather than being smooth, due to the system's 4-bit sound processing. "Due to the limited amount of channels, you also have to be aware that sound effects can interrupt the music," adds Nicolas. "Ideally, you'll have sound effects play only on the channels you use for accompaniment, so they won't silence the melody." Sound is also one of the differentiating points between the Famicom and the NES, as the Famicom supports expanded audio through the cartridge port – something that the Famicom Disk System and certain special cartridge chips take advantage of. Since the NES doesn't have this capability, Japanese versions of games such as *The Legend Of Zelda* and *Castlevania III: Dracula's Curse* have noticeably better music than their international counterparts.

Indeed, it was the special chips that were one of the key factors in the longevity of the NES. As well as supporting both ROM and RAM on cartridge PCBs, the NES was able to utilise chips that Nintendo called Memory Management Controllers. As well as allowing for bank-switching that broke past the storage limitations of the original cartridge specification, these chips could provide extra features to assist in game development, and for the Famicom even expansion audio. That's ultimately how the system was able to go from hosting games like *Donkey Kong* to much more complex titles like *Kirby's Adventure* over the course of a decade.

Of course, even with ROM capacity greatly exceeding the original 40KB total, developers often fought for every byte. "A common issue in those days was trying to cram your

> MY TITLE PAGE ARTWORK LOOKED TOO MUCH LIKE MICHAEL KEATON AND I HAD TO DO IT AGAIN TO MAKE IT LOOK MORE LIKE BEETLEJUICE
>
> **KEVIN BAYLISS**

» [NES] Road effects in games like *Slalom* were created by altering the scrolling after each scanline.

» [NES] *Punch-Out!!* uses its own dedicated mapper chip to help with the large character sprites.

games onto the tiny cartridges we were given," says Paul. "This was complicated on NES/Game Boy (both 8-bit systems with 64KB memory maps) by having to have bank-switching where the region might be divided up into four 16KB blocks, and you could switch different ROM banks in and out of them. So you had to carefully arrange what code and data was where and how you would jump from one ROM bank to another in the same address space, using standard overlay jump tables at the start of the space. We also had to develop data compression routines, often different ones for different types of data – character data, map data, text data, music data. Huffman compression was used quite a bit, but I did spend time staring at printouts of other types of data, looking for patterns that I could use to develop compress software for."

Though on-board chips kept the NES competitive in the face of increasingly powerful competition, true 16-bit consoles eventually offered experiences that were beyond the capabilities of the ageing 8-bit architecture. A huge base of diehard fans and hand-me-down consoles still sustained the system for a while, and the NES saw its final official release in 1994. That wasn't the end of the story though, as the popularity of the machine has endured for decades. "Back in the day, even though I never had a NES of my own, I always looked forward to playing one at a friend's house. I suppose that this circumstance and the great times we had together are what put it on a pedestal for me," says Julius Riecke of Morphcat Games. "Thus, creating a 'Nintendo game' was a dream of mine since I was young. I had lost track of it for a while until it came back to me in 2005, when I learned there was a homebrew scene for this console." Many people share that motivation, and a steady supply of new NES games is released each year.

NES games are made rather differently to the days when Paul and Kevin created them at Rare, thanks to modern tools and emulators with sophisticated debugging features.

> HUMAN PLAYERS WILL INTERACT WITH EVERYTHING AROUND THEM IN WAYS A DEVELOPER CANNOT FULLY PREDICT
>
> **NICOLAS BÉTOUX**

"We use Notepad++ for coding, YY-CHR and NEXXT for graphics and FamiTracker for music and sound," says Nicolas, explaining the tools Morphcat Games uses. "Julius created special tools like a map editor, tileset editor and sprite-animation editor to simplify some parts of our projects," he adds. James Deighan of Mega Cat Studios says, "Different projects have different pipelines and tools. As a general rule, it's CA65 and CC65, alongside project-specific tools that aid in the development of an individual project. Some tools accelerate collaboration across the team, like level-design workflows where technical artists and game designers can work more closely with each other. Others are project specific for squeezing the most space, as an example, out of a project."

Arguably the most ubiquitous tool used by NES developers today is FamiTracker. "Think entering music notes into a spreadsheet," says Nicolas. "That may sound excruciating, but the workflow is actually really good when you get used to it, and it certainly beats punching byte values into a text editor manually, while still giving you a lot of control over the intricacies of the sound chip. You can feed the output of FamiTracker into one of the excellent music engines developed by the NESdev community and never have to worry about it again in your game." James is similarly full of praise for the software, saying, "The community is great and the resources for using the tracker applications are accessible to anyone, whether you're an experienced composer or just a fan of chiptunes."

With these modern tools at their disposal, NES developers today tend to try very ambitious projects. Four-player action games are a rarity on the NES, but Morphcat Games created an excellent one in *Micro Mages*. This required some very economical use of the hardware. "The NES allows for a maximum of 64 hardware sprites to be on the screen at any time," Nicolas begins. "These sprites are 8x8 pixels in size (there's an 8x16 mode, but it has its drawbacks) and can be pieced together to form bigger sprites.

"So, to get a 16x16 sprite in the first mode, you'll have to use four hardware sprites. If you have all four players use 16x16 sprites, that's one quarter of all the available hardware sprites used on players! Also, there's a hardware limitation where if more than eight sprites are on the same horizontal line, they start to disappear," he continues. "To remedy this and still allow for many other objects and graphical effects on the screen, the player characters in *Micro Mages* use a single 8x8 sprite each."

» [NES] Morphcat Games' *Micro Mages* packs an impressive amount of multiplayer action for a NES game.

» [NES] *Metroid* scrolls both horizontally and vertically, but only in one direction at a time.

» [NES] Getting a good likeness in games like *WWF Wrestlemania* was tricky for Kevin.

PROTECTION RACKET

INSIDE THE LEAST-LOVED TECHNOLOGICAL INNOVATION OF THE NES

Nintendo is well known for being particularly protective of its products, and the 10NES chip is the first major example of that tendency. This chip was included in the front-loading models of the NES, and functioned as a locking device, which requested a particular code from the key chip on a cartridge. If that key wasn't supplied successfully, the console would blink on and off.

The primary purpose of the 10NES was to allow Nintendo to keep tight control of the NES software market. Publishers had to pay for a licence to create NES games, without which they wouldn't be able to bypass the 10NES chip. Nintendo argued that this system was in place to prevent a glut of poor-quality third-party games, like the ones that had dented consumer confidence in the Atari 2600 market. However, Nintendo's third-party policies were highly restrictive – its content guidelines were notoriously strict, it limited publishers to just five releases per year and prevented them from publishing on other companies' platforms. Nintendo also acted as the sole supplier of NES cartridges, which gave it a further cut of the profit from each game and allowed it to dictate how many copies of each game could be manufactured. The 10NES also served as a region-locking tool, and an anti-piracy measure.

» [NES] *Action 52* was exactly the kind of garbage Nintendo wouldn't have wanted on the NES.

» [NES] *Micro Machines* made for a rather excellent official release on other consoles.

Various publishers sought to avoid signing up as licensed developers, and worked to circumvent this protection. Tengen obtained a description of the chip from the United States Patent and Trademark Office via deception, and created a clone chip called the Rabbit – a move that would result in Nintendo successfully suing the company for copyright infringement. Early Codemasters games utilised the key chips of licensed cartridges by employing a pass-through cartridge design, similar to that of the Game Genie. Games from Color Dreams typically attempted to mess with the power supply to the 10NES chip to prevent it from operating.

Unlicensed games eventually thrived on the NES. Some of them vindicated Nintendo's stance – games like *Action 52* were infamously awful, while the likes of *Bible Adventures* and *Bubble Bath Babes* violated Nintendo's content guidelines in relation to religious content and nudity. Still, genuinely worthwhile games such as *Micro Machines*, *RBI Baseball 2* and *Rolling Thunder* were released as unlicensed games. The 10NES was not included in the top-loading NES-101 consoles, making them more reliable and region-free.

THE MINI MAKING OF

ALWA'S AWAKENING: THE 8-BIT EDITION

MIKAEL FORSLIND EXPLAINS THE PROCESS OF MAKING AN IMPRESSIVE MODERN NES GAME

WHY DID YOU DECIDE TO CREATE A VERSION OF *ALWA'S AWAKENING* FOR THE NES?

So originally there was this guy called Paul Molloy, of Infinite NES Lives. On Twitch, he did a fan remake on NES for *Alwa's Awakening* – without us being involved, he did it for fun. We just helped out and promoted it and, you know, joined the chat and watched the videos. So Martin Lindell of Embracer saw these Twitch streams and just emailed me and said, "Would you want to make a full NES release of *Alwa's Awakening*?" I asked Paul but he was too busy and had prior engagements. But here I was with Embracer wanting to fund the whole project, so that's when we put out a job ad looking for NES programmers.

WHO ANSWERED THE CALL?

I knew Brad Smith, who did the NES code, from his *Lizard* games and being part of the retro community. I just knew that he was really talented, so I actually sent him the job ad and I was like, "Would you be interested in this?" He was, so he did the NES port's code, and we did the art, the music, the game design and the level design.

WHAT SORT OF TOOLS WERE USED?

Brad did a lot of cool tools. I think they were written in Python and what they did was that they took the art and the levels we had for the original game – they were made in Tiled, a tile map editor, and the art was just normal PNG sprite sheets – and basically gave us a report that said, "You're using X amount of colours in this sheet and using X amount of colours in this sheet." With that information, our artist could take the art and just decrease the amount of colours.

WHAT KIND OF ADJUSTMENTS NEEDED TO BE MADE TO THE GAME?

The original game was based on a 16:9 ratio, so in order to fit it in a 4:3 resolution, we had to decrease the width of the rooms and we also had to decrease one tile in the ceiling. I think music was the thing we had to change the least, because our composer used the FamiTracker tool to compose NES music. I think the only thing he had to do is just trim a few of the instruments here and there and just decrease the amount of bytes used. But I think his work was like a day or two.

» [NES] *Alwa's Awakening* shows just how much you can achieve with the NES graphically.

ELDEN PIXELS NORMALLY DEVELOPS FOR MODERN PLATFORMS – WHAT WAS THE MOST UNUSUAL ASPECT OF WORKING ON THE NES?

For a number of months, I had four CRT TVs at the office and I had three or four different NES consoles so I could try the PAL, the NTSC, the Japanese ones. You have to deal with all kinds of things like overscan on old CRTs and stuff like that. I wouldn't say it was new to me, but it was new to me as a developer.

» [NES] The main player character uses overlaid sprites to achieve a more colourful look.

» [NES] *Alwa's Awakening: The 8-Bit Edition* is available on PC and Evercade as well as the NES.

» [NES] *Castlevania III: Dracula's Curse* uses the MMC5, one of the most powerful NES mapper chips.

» [NES] The NES wasn't designed to imitate sprite-scaling arcade games, but *Cosmic Epsilon* does an admirable job.

» [NES] *Battletoads* scrolls the walls faster than the back of the tunnel to create an illusion of depth.

The 8-bit CPU also proves to be a limiting factor, according to Nicolas. "If a game has an enemy which only moves sideways and turns around when it encounters a wall, that's a limited number of checks that need to be performed. Human players, on the other hand, are wild cards, they will interact with everything around them in ways a developer cannot fully predict. Also, if players have the ability to shoot, the number of objects on the screen adds up *fast*," he tells us. "This isn't that much of an issue in a single-player game and you usually get away with things in a two-player game. A four-player game, however? Ouch. In *Micro Mages*, we spent a lot of time on optimisation to avoid lag. However, in four-player mode, there are occasions where the game still slows down when there is too much going on."

One advantage that modern developers do have is the ability to pick and choose from a wide range of memory management solutions – more commonly known as mappers these days. "They are just so interesting to unpack, and develop for," says James. Despite having the most powerful ones available, they are not always the default choice. "When a game is planned for development at Mega Cat, we start working backwards from what's required for the core gameplay to be fun," James explains. "In some cases, we end up defaulting to something powerful like the MMC3 mapper. In others, we can keep it simple and use a discrete mapper, like an NROM." Indeed, the recent NES game *Blazing Rangers* from Japanese developer Karu_gamo specifically used the simplest mapper, the NROM, to evoke nostalgia for the early days of the Famicom.

> I LOVED CODING THE NES, IT WAS A COMPLETELY DIFFERENT ARCHITECTURE FROM THE HOME COMPUTERS I'D WORKED ON BEFORE
>
> **PAUL MACHACEK**

That's really the core of the ongoing fascination with the NES from developers – not only is it a technically interesting system, but one that offers a strong nostalgic pull. Even those who first encountered it in a work context, like Kevin, feel that nostalgia. "I enjoyed working on the NES as an artist, because you really knew the system eventually. Whether you were creating backgrounds, animated sprites, title pages or front-end (scoreboard) graphics – you had a system in place that you'd used on a previous game and occasionally you'd come up with something new to push it a little further and squeeze a little more out of it visually. Simple times, but fun!"

Although Paul laments the number juggling inherent in programming for the 6502, he also remembers the system fondly. "I loved coding the NES, it was a completely different architecture from the home computers I'd worked on before, there were interesting tricks you could play with the character-mapped screen which you could exploit to give depth – go check out our *Battletoads* games on NES/Game Boy – and I regarded it all as an interesting technical challenge to 'solve' new issues around this alternative hardware architecture." But for all of the fun of programming the system, Paul rightly points to the results of that work as the reason for the success of the NES. "It can't be forgotten that Nintendo had an incredible catalogue of games on the systems, notably *Super Mario* and *Zelda*. *Super Mario Bros 3* was a huge step forward, and an absolute pinnacle at that time," he says.

If you're an aspiring retro-game creator, the NES might just be the ideal platform for you. "NES code, graphics and sound are easy to manage by one person each in the team," says Nicolas. "Compared to now, the programming language feels more obscure and complex than modern languages. All the limitations push you to spend more time for everything," he admits. "But it also forces you to think twice about each idea. In the end, you can focus on the most important ones for gameplay. These limitations can keep the scope of your game in check – there's only so much you can do." If you find yourself drawn to the idea of tackling that technical challenge, show us the results one day – we'll always be interested in seeing them.

» Modern NES releases often meet the physical quality of the retail releases of old.

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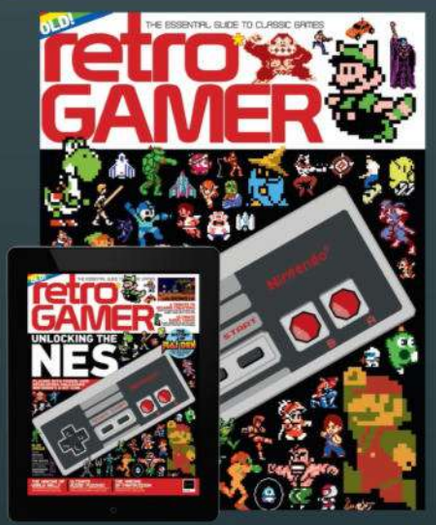

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ULTIMATE GUIDE

CHAOS

SELECT YOUR SPELLS AND LET THE GODS DECIDE YOUR FATE IN THE FINEST MULTIPLAYER ZX SPECTRUM GAME OF ALL TIME. WELCOME TO CHAOS, THE MAGICAL BATTLE TO THE DEATH ON THE PLANE OF LIMBO

WORDS BY GRAEME MASON

Having had moderate success with *Battlecars* and *Rebelstar Raiders* in 1985, Julian Gollop subsequently unleashed what many consider his masterpiece, at least on the ZX Spectrum computer. Don't let those unassuming graphics fool you – *Chaos* (sometimes known as *Chaos: The Battle Of Wizards*) is a game of unprecedented depth that remains a firm favourite for fans and remakes almost 40 years later.

Drawing on its coder's experience of board games, *Chaos* presents a blank black screen populated by between two and eight wizards battling to the death for victory. Each wizard has a selection of spells allocated at the beginning of the game. A menu appears at the start of each round, and this presents four options: Examine Spells, Select Spell, Examine Board and Continue With The Game. Under the first option, the wizard can consult their grimoire and study the various effects of each spell. Most spells have a range, indicating how far from the wizard it can be cast. All spells have a casting percentage, ranging from 10% for the heftier conjurations to a guaranteed 100% for certain easy spells. There are defensive and offensive spells for the wizards themselves – Magic Armour, Swords, Bolts and so on – and enchanted castles for the caster to hole up in should things get a little too hot. In addition to these, each wizard can summon creatures to the Plane to help them defeat their opponents, and this is the core of *Chaos*' gameplay.

"THE BEST GAMES IN MY EXPERIENCE ARE THE ONES WITH SKILLFUL USE OF A RANDOM NUMBER GENERATOR"
IAN GLEDHILL

From feeble Giant Rats to towering Golden Dragons, there's a whole menagerie of creatures in *Chaos*, each with different abilities and weaknesses. Real-world animals include Bears, Lions, Bats, Eagles and Horses. Beyond these are the many fantastical creations, the aforementioned Dragon, plus Orcs, Centaurs, Ogres, Dire Wolves and Elves and a devilish set of undead monsters. These – Vampires, Ghosts, Skeletons, Zombies, Wraiths and Spectres – cannot be attacked by living things and are all formidable opponents.

Whether living or undead, each summoned creature has a set of statistics based on several central tenets: its ability in combat and defence, its ranged attack strength (and distance) and overall movement allowance. A number out of nine measures the first three stats, while ranged attack distance goes up to six. Movement Allowance dictates how many tiles the unit can move once selected. This creates a balance between each creature, with many of the more powerful monsters moving slower or lacking in ▶

» [ZX Spectrum] Trapped by a rampant Gooey Blob, things don't look good for this white wizard.

MASTERING CHAOS

KEY TIPS TO HELP YOU BECOME THE KING OF THE WIZARDS

BUFF YOUR WIZ

■ The player's wizard is hopelessly outclassed against higher-level computer opponents. Level the playing field by beefing up your character's defence (Magic Shield and Armour) and attack (Magic Knife, Sword and Bow). The latter items prove to be quite useful as they will also allow you to attack the undead.

EXAMINE SPELLS

■ Each spell has an information page detailing statistics such as Combat, Defence and Movement Allowance. However, the most crucial stat sits at the bottom: Casting Chance. This percentage figure adjusts according to the wizard's ability and the alignment balance of the Plane. Play the odds before casting.

TIP THE BALANCE

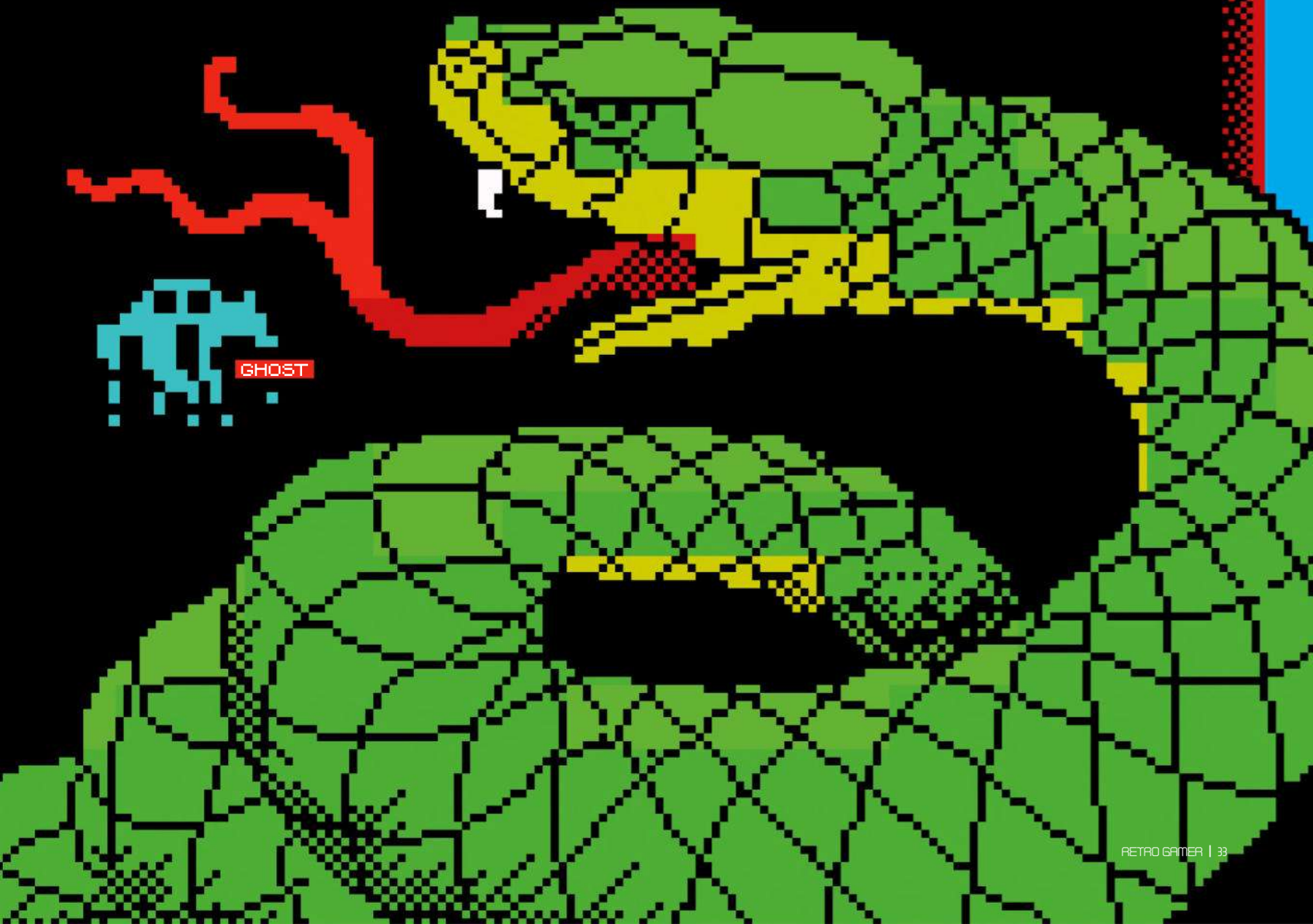
■ Each wizard usually possesses one or two alignment spells called Chaos or Law. Successfully casting these influences the mood of the board and adds a percentage to each spell of the same alignment. It's eventually possible to make low-percentage spells such as the Golden Dragon a 100% certainty.

USE YOUR ILLUSION

■ While a rival wizard can instantly dispel them, Illusion spells can still be helpful as a deflection tactic or for getting rid of a particularly tough monster when you battle rival wizards. The final player has an advantage here: they have a guaranteed one-round use of an Illusion spell. Use it to try and turn the tables.

YOU'LL BE GRATEFUL WITH UNDEAD

■ Living beings cannot attack undead creatures unless it's a wizard armed with a magic weapon. This means that even the lowest of the undead, the Zombie, can hold off an army of powerful opponents, giving its owner some valuable breathing space.



IT'S NOT A BUG, IT'S A

SECRET GOOEY BLOB POWER

The Gooey Blob spell sends a mass of green goo across the board. Monsters caught in it are released by destroying the Blob. Once freed, any captured illusory creature suddenly becomes real, making the Blob a magnet for any bluffing conjurer.

AN UNDEAD CERT

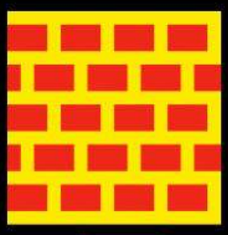
Do you want to make your wizard capable of withstanding any normal attack? Then simply cast a Raise Dead spell on any dead mountable creature such as a Horse or Pegasus, hop on, and then you'll be undead, too. Fangs are not included.

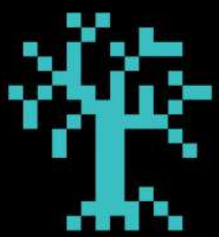
BREAKING THE ENGAGEMENT

Once monsters (and wizards) become entangled in close combat, escape can be tricky. Fortunately, there's a handy bug for anyone in a pickle: press 'I' and a direction away from your enemy, and you'll attack air and move one space.

MAXIMISING MAGIC WOOD

There's a neat way to make Magic Wood even more effective, especially for the wizard in the top-left corner. Place yourself one position in from the corner, and the Magic Wood spell plants three trees right next to each other.





"I THINK THEY RAN OUT OF TIME, BECAUSE TURMOIL WAS NEVER BUG-FIXED AND MANY SPELLS WEREN'T IMPLEMENTED AT ALL"
IAN GLEDHILL

» [ZX Spectrum] There be DRAGONS!

» [ZX Spectrum] Rampant powerful monsters are typical should an alignment get out of control.

ranged attacks. Once successfully cast, the wizard's creation can be moved around Limbo during their turn, attacking other wizards and their servants.

Among the living creatures, there are two further subsets. Flying creatures can cross long distances and assault enemies with impunity. Creatures with a ranged attack, of which the most formidable is the Elf, can do the same, albeit with a line-of-sight restriction. Dragons combine both of these elements, while the Pegasus, Gryphon and Manticore can also be ridden by the wizard. Of these, the last one, the Manticore, is singular in that it also boasts a ranged attack. Wizards can also protect themselves by sitting astride Horses, Unicorns and Centaurs – again, the latter also wields a deadly ranged attack.

All of these creature spells have a percentage score to cast. There is, however, one way to ensure you have a nice shiny new monster to play with. Upon selecting a summoning spell, the wizard can cast an Illusion. An Illusion has precisely the same properties as a real monster, attacking and defending with just as much force. There's just one drawback: the mirage can be shattered at any moment by an opposing wizard firing a Disbelieve spell at it.

In a nod to classic tabletop role-playing games, each spell has an alignment, Law (arrow), Chaos (asterisk) or Neutral (dash). Should Law prevail over Chaos (or vice-

FEATURE

HOW TO USE CHAOS' BUGS TO YOUR ADVANTAGE

CREATING TURMOIL

■ The mythical Turmoil spell is a good idea – in theory. Once cast, each item on the Plane Of Limbo is moved to another location. Unfortunately, the ZX Spectrum can't handle the process and crashes, making it the Speccy equivalent of tipping over the Monopoly board before you go bust.

A TRANSFORMING DECREE

■ Position a weak creature, such as an Orc or Giant Rat, over the corpse of a defeated monster and cast Decree or one of its peers. Then, behold, as the lowly and pathetic wretch is reborn as a mighty Golden Dragon!

» [ZX Spectrum] The green wizard has cast a Shadow Wood to protect them from assault.

versa), its related symbol will appear on the menu screen. As Limbo bends more towards one particular alignment, casting spells of that nature becomes easier. Specific Law and Chaos spells can tilt the balance even further and are especially useful for wizards with a book full of spells of one alignment. A smattering of miscellaneous other spells completes the list of enchantments.

Wall places four solid blocks between the wizard and their ground-based enemies; Magic Castle and its chaotic opposite, Dark Castle, provide impenetrable fortresses for the wizard to hole up in; and Dark Power and its ilk enable the wizard to utterly annihilate a target (or, in the case of opposing wizards, destroy all their creations). Finally, there are two of the game's most famous spells, both of which can sweep across the board, taking all enemy units with them. Gooey Blob, while ▶

DEVELOPER Q&A

RETRO GAMER CHATS TO CHAOS SUPERFAN IAN GLEDHILL ABOUT HIS CHAOS EDITOR, REMAKE AND MORE

CHAOS APPEARED IN SEVERAL GUISES – WHICH ONE DID YOU FIRST PLAY?

It was actually my friend Scott's copy of *Chaos* which he found with a copy of *Your Sinclair*. I do now have an original large box *Chaos*.

WHAT DO YOU THINK MAKES *CHAOS* SO GREAT?

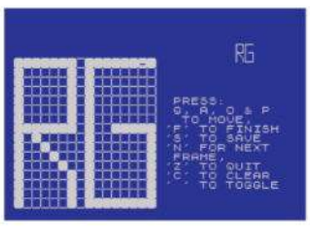
Replayability and the element of chance. The best games in my experience are the ones with skillful use of a random number generator. A scripted game can be great for a specified number of hours of gameplay, but a randomly generated game can be played over and over again.

DID YOU PLAY MULTIPLAYER?

Oh yes, although rarely these days. I still always name my wizardly opponents after my friends (including Scott who introduced me to the game, a tradition of mine now). His computer equivalent beats me almost as often as he did!

WHY DID YOU DEVISE YOUR *CHAOS* EDITOR AND HOW DOES IT WORK?

Browsing through the memory using my Multiface, I came across text for the creatures and spells in the game, so I found I could customise *Chaos*. Then, I worked out how the undead, flying and so on were stored. Once this was done, there was no way I wasn't going to write an editor. It works by just doing simple searches for text strings and knowing the location of the creature statistics. I made a visual grid as well so you could alter the graphics – it would display them in the grid and you could toggle bits on and off on each frame of animation.



WHERE DID YOUR *CHAOS* EDITOR END UP APPEARING?

It was in the Program Pitstop section for type-in programs [in *Your Sinclair*]. I was paid – eventually – they took a bit of prodding to release the cheque for £50!

YOU ALSO WROTE AN IMPROVED VERSION OF *CHAOS* – HOW DID IT BETTER THE ORIGINAL GAME?

The editor could only edit data, not code. The assembly routines sped up the search functions and the graphics editor bit. I still have most of this version, which I retrieved from a microdrive cartridge a few years back.

WHAT DID YOU DISCOVER WHILE HACKING *CHAOS*?

That there's loads of stuff that was never used. I think they ran out of time, because Turmoil was never bug-fixed and many spells weren't implemented at all. Who knows how the Blind spell would have worked? Or Tempest? Teleport would have been good, and Consecration sounds powerful. But I think the best spell would have been Dead Revenge!

Our thanks to Ian for his time. Visit his shop, mutant-caterpillar.co.uk/shop, which is a specialist in retro computer repairs.

SPELL IT OUT

TWELVE OF THE BEST SPELLS TO KEEP UP YOUR SLEEVE

MAGIC WINGS

TYPE: WIZARD BUFF
ALIGNMENT: NEUTRAL
BASE CASTING CHANCE:

■ Magic Wings transforms you into a flying wizard, able to escape danger and attack from relative safety.

VAMPIRE

TYPE: MONSTER
ALIGNMENT: CHAOS
BASE CASTING CHANCE:

■ This sucker can fly, has a decent attack of six and a fantastic defence of eight. Hard to cast. Hard to avoid. Hard to kill.

ELF

TYPE: MONSTER
ALIGNMENT: LAW
BASE CASTING CHANCE:

■ While useless in close combat, the Elf boasts a powerful bow, one of the game's most effective ranged weapons.

MAGIC BOW

TYPE: WIZARD BUFF
ALIGNMENT: LAW
BASE CASTING CHANCE:

■ Difficult to cast but an invaluable attack option for a wizard, enabling them to join the battle without getting too close

GOLDEN DRAGON

TYPE: MONSTER
ALIGNMENT: LAW
BASE CASTING CHANCE:

■ The ultimate Dragon and monster: nine attack, nine defence and a fearsome ranged attack that'll incinerate most enemies.

BEAR

TYPE: MONSTER
ALIGNMENT: LAW
BASE CASTING CHANCE:

■ The Bear is a good all-rounder, blending solid attack and defence with nimble movement and a decent casting chance.

MAGIC WOOD

TYPE: MISC
ALIGNMENT: LAW
BASE CASTING CHANCE:

■ Casting Magic Wood provides a forest of trees, each with an extra spell inside. It also acts as a good defence.

SUBVERSION

TYPE: MISC
ALIGNMENT: NEUTRAL
BASE CASTING CHANCE:

■ This spell converts enemy monsters to your own cause, but beware: it doesn't work on Illusions, so best to try a Disbelieve first.

SHADOW FORM

TYPE: WIZARD BUFF
ALIGNMENT: NEUTRAL
BASE CASTING CHANCE:

■ With a combined defence and movement bonus, this clever spell boosts your wizard. It ends when you attack an opponent.

MAGIC BOLT

TYPE: MISC
ALIGNMENT: NEUTRAL
BASE CASTING CHANCE:

■ Along with Lightning, Magic Bolt is one of two magical ranged spells. Strike out at an enemy for instant destruction!

MAGIC FIRE

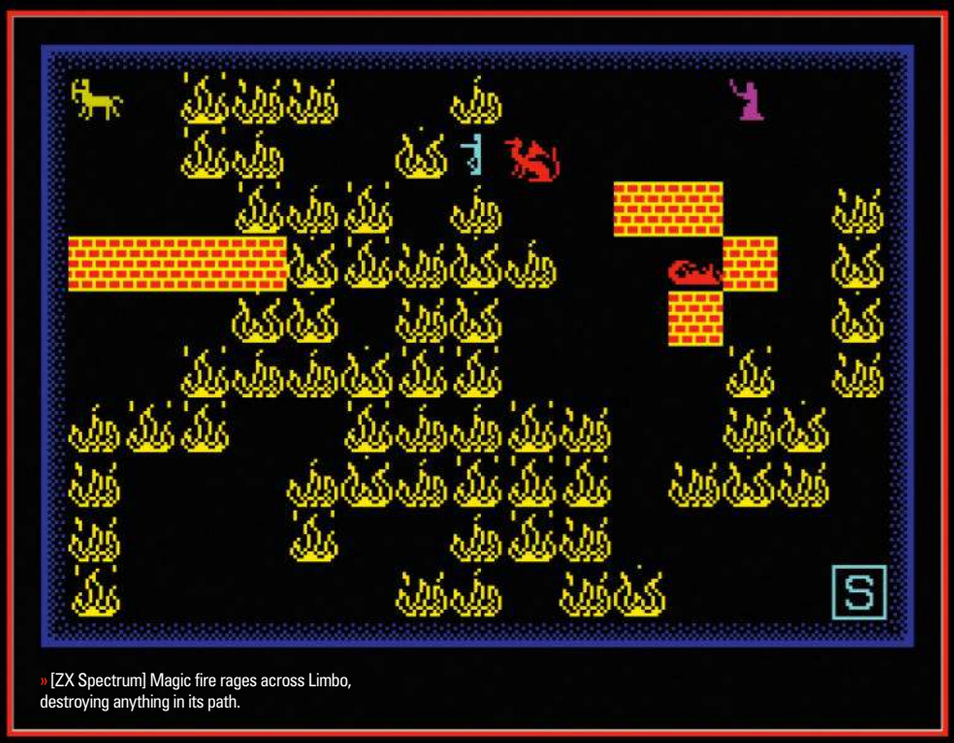
TYPE: MISC
ALIGNMENT: CHAOS
BASE CASTING CHANCE:

■ A cleansing fire that can engulf the Plane Of Limbo and everything on it. Unlike the Gooey Blob, it is immune to attacks.

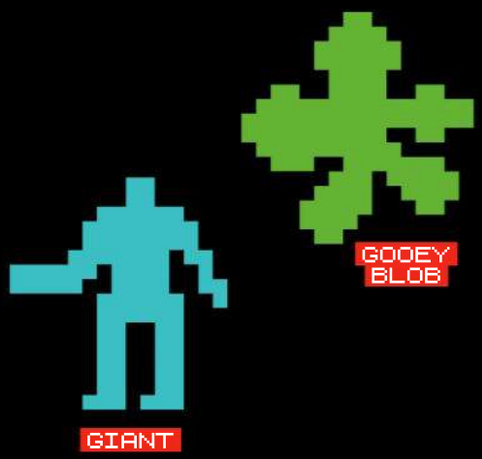
RAISE DEAD

TYPE: MISC
ALIGNMENT: CHAOS
BASE CASTING CHANCE:

■ Reanimate corpses into an undead monstrosity! With an undead Golden Dragon, nothing stands in your way.



» [ZX Spectrum] Magic fire rages across Limbo, destroying anything in its path.



virulent, can at least be destroyed; no such luck with the devilish Magic Fire, a fierce blaze that usually ends up threatening every living (and undead) thing on Limbo.

Once each wizard has chosen their spell, the game flicks to the stark representation of Limbo. Using the keys surrounding 'S', each wizard casts their spells in turn before moving to the combat round, again in turn. When killed, a wizard explodes in a cascade of colour, and all their creations disappear from the game. To survive and triumph, the spellcaster will need cunning, stamina and no little amount of luck.

Games Workshop's computer-game division initially published *Chaos* in 1985. However, when it abruptly decided to leave the publishing side of the business (Games Workshop continued to develop games for a couple more years), Julian Gollop's opus was ironically left in limbo. A few months later, the budget arm of Firebird Software picked the game up, but it wasn't until the advent of cover tapes that most Spectrum fans noticed *Chaos*.

Your Sinclair's Smash Tape 33, on the cover of issue 57 of the world's most skillo Speccy magazine, housed two complete games: Mirrorsoft's great-Scrabble-score but average game *Zythum* and *Chaos*. While the price of *Your Sinclair* had risen to cope with the extra costs involved with

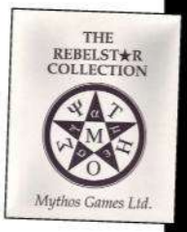
"I WAS PAID – EVENTUALLY – THEY TOOK A BIT OF PRODDING TO PRODUCE THE CHEQUE FOR £50!"
IAN GLEDHILL

covertapes, many readers were astounded by the incredible value for money this issue's tape offered. The magazine repeated the trick, offering *Chaos* as part of a grander compilation just under three years later, shortly before its final issue. And there was *Chaos* in that last issue of *Your Sinclair* (issue 93 in case you were wondering). Under a feature entitled The Grand *Chaos* Play-Off, luminaries of the mag such as Rich Pelley and Jonathan Davies, competed to see who would become the King Of *Chaos*. The grand battle ended as a draw – would there be a rematch? – enquired the host. "Too late," came the reply. "They'd all gone down the pub."

Like many of Julian Gollop's Spectrum games, *Chaos*' enduring popularity boils down to one thing: a finely tuned balance between fast-paced action and tactical gameplay. Few Spectrum fans would ever claim to have been experts in the strategy genre, but you'd be hard-pressed to find one who hasn't played this supremely compulsive and entertaining battle of the wizards. ✱

THE CHAOS CONTINUES

MORE INFO ON JULIAN GOLLOP'S STRATEGY CLASSIC



- Each creature (and wizard) has a Magic Resistance rating which protects it from magical attacks and subversion spells.
- Disbelieve is the only infinite-use spell.
- Pressing 'I' during combat handily divulges a unit's stats.
- Unlike the Magic Wood, wizards manually place the barbed Shadow Wood.
- Wizard buffs do not stack and overwrite each other, so don't cast Magic Knife (+2 to attack) after successfully casting Magic Sword (+4 to attack).
- Wizards have a Magic Ability rating between zero and two. Spells are easier to cast the higher the number.
- Characters with a higher Manoeuvre Rating find it easier to break off in combat.
- *Chaos* is based, in spirit, on the Games Workshop tabletop game *Warlock*.
- In the final issue of *Your Sinclair*, readers voted *Chaos* as the fifth-best Spectrum game of all time.
- Julian Gollop followed up *Chaos* with *Lords Of Chaos* in 1990.
- Julian Gollop's Mythos Games included *Chaos* as part of its 1991 compilation, the *Rebelstar Collection*.

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HI

Ninja Golf

SHURIKENS AND SAND WEDGES

» ATARI 7800 » 1990 » BLUE SKY SOFTWARE

Supposedly, an Atari executive once decided that since sports games and beat-'em-ups were both popular, a game that combined both would be *very* popular, and thus *Ninja Golf* was born. You've probably heard of it as it often shows up on lists of weird game concepts – and that makes plenty of sense, because the title alone makes you stop, take a step back and wonder how such a game would even work. Since it's an Atari 7800 game, it has become one of a select few games that plenty of people are aware of but relatively few have actually played.

The problem with that is that since *Ninja Golf* tends to end up on comedy lists, it's often dismissed as being a rubbish game. That's an unfair assessment though, as the unusual concept is a fairly clever blend of ideas that stands as one of the platform's most interesting games. There's no need to worry about par – you just take your shot, run to the ball and fend off masked adversaries along the way, in *Kung-Fu Master* style. Once you reach the putting green, you'll face off against a big dragon in a boss battle. What makes *Ninja Golf* so much fun is that it leans into its inherent silliness. Run through the bunkers and you'll have to contend with deadly snakes, while the water hazards really are hazardous thanks to the sharks that swim in them.

With the Atari 7800 not yet having a place in my own collection, I had no idea quite how much fun *Ninja Golf* was until I actually sat down and played it via the Evercade. I'm hoping that between that release and the inclusion of the game on the excellent *Atari 50* compilation, we might be due for a reappraisal of *Ninja Golf*, because while it might be weird and it does eventually get a little repetitive, it's certainly anything but bad.

THE MAKING OF Werewolves OF LONDON

RUN RAMPAGE ACROSS THE ROOFTOPS! GET SAVAGE IN THE SEWERS! HAVE A HAIRY FIT IN HYDE PARK! SPREAD TERROR IN THE TUBE STATIONS! IT MIGHT SOUND LIKE AN AVERAGE WEEKEND IN LONDON, BUT IT'S THE PREMISE FOR A TRUE CULT CLASSIC

WORDS BY IAIN MCGARRY

IN THE KNOW

- **PUBLISHER:** MASTERTRONIC
- **DEVELOPER:** VIZ DESIGN
- **RELEASED:** 1987
- **PLATFORM:** AMSTRAD CPC, ZX SPECTRUM, COMMODORE 64
- **GENRE:** ARCADE ACTION

Back in the early Eighties, when the bedroom coder revolution was gaining momentum, a young Steve Howard spotted an ad in the local Job Centre that piqued his interest. Having already developed his first game on the Sharp MZ-80K, Steve wanted a job before he went to university and from the advert, successfully applied for a company called Software Workshop. When Steve started he immediately struck up a friendship with an artist who also worked there called Paul Smith. "Paul was a bit annoyed that we did all the work for a relative pittance while our boss got the big money, so he persuaded me to leave, and we would create games and get to keep all the money," Steve says, reflecting back.

The first game of the new partnership was *Bride Of Frankenstein*, a modest enough start for the duo, which provided the foundation for their next game, *Werewolves Of London*. So, let's start with the inspiration behind the idea, it's long been thought that this was influenced by the 1981 cult movie *An American Werewolf In London*, and while Steve admits to having seen the movie "on video I think" before starting work on the game, it was Paul who suggested the proposal. "At the time I thought it was because of the film,"

» [Amstrad CPC] A good version of the Warren Zevon song plays over the main screen.

» [Amstrad CPC] Eating out in London. Chowing down on victims will restore your energy.

DEVELOPER HIGHLIGHTS

BRIDE OF FRANKENSTEIN

SYSTEM: AMSTRAD CPC, VARIOUS

YEAR: 1987

FRANKENSTEIN JNR (PICTURED)

SYSTEM: AMSTRAD CPC, VARIOUS

YEAR: 1990

WIPE OUT

SYSTEM: AMIGA, ATARI ST

YEAR: 1990

» [Amstrad CPC] Tail the family member when the cross flashes until night-time.

» *Werewolves* designer and programmer Steve Howard, Now senior programmer at Double Eleven Limited.

he says. "Paul however had thought of it because of the Warren Zevon song, which the music in the game was also based on. So, it was based on the song, or at least the title was."

With the song ringing in their heads, they soon got to work with Steve helping with the design and programming and Paul doing all the artwork and handling the business side of things. Working from the base of *Bride Of Frankenstein*, the way it was rendered was a complete rewrite as the game was evolving as it was being written. As for the story itself, which was set in London, the main character has had a lycanthropic curse placed on him by an aristocratic family resulting in him becoming a werewolf at night. The only way to rid the curse is by hunting down and killing each of the eight members of the family.

"THE GRAPHIC LIMITATIONS PRETTY MUCH SANITISED THINGS, AND YOU COULD GET AWAY WITH A LOT IN THOSE DAYS"

STEVE HOWARD

Werewolves' gameplay lets you roam the streets of London, from Hyde Park to the subway underground, rooftops and sewers, looking for the aristocrats. When one of them is near, a cross will appear flashing at the bottom of the screen and when you transform into a werewolf, you can kill and eat the character. Eating the person is optional, if you want to go the vegetarian route, however there are benefits from devouring the person as they can give you a top up of blood that acts as your health bar, and it also gives a satisfying crunching sound when chomping down on the victim.

» [Amstrad CPC] Alone in the dark. The torch is a must to see in the subway tunnels.

When strolling around the streets as a werewolf, the police will be on the lookout and with each kill the police presence gets stronger. If they catch up to the player they will be arrested and thrown into werewolf jail for the night until the player transforms back into human form. Some police will even be armed and will take matters into their own hands and start shooting the player. When hit, the Blood Meter will start to drip out and when it runs out the game is over. There are useful items in the game to encourage exploration; bandages to heal the wounds from being shot, crowbars to open manholes and torches to see in the dark, a must if you want to finish the game.

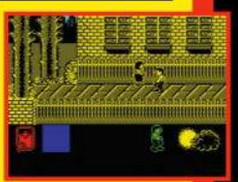
CONVERSION CAPERS

WHICH VERSIONS WILL LEAVE YOU HOWLING?

AMSTRAD CPC

Being the platform that the game was created on, this is the superior version. Big, colourful graphics and great music that plays throughout all contribute to the atmosphere perfectly. The satisfying crunching sound effect when you eat people also makes this the easy standout.

ZX SPECTRUM



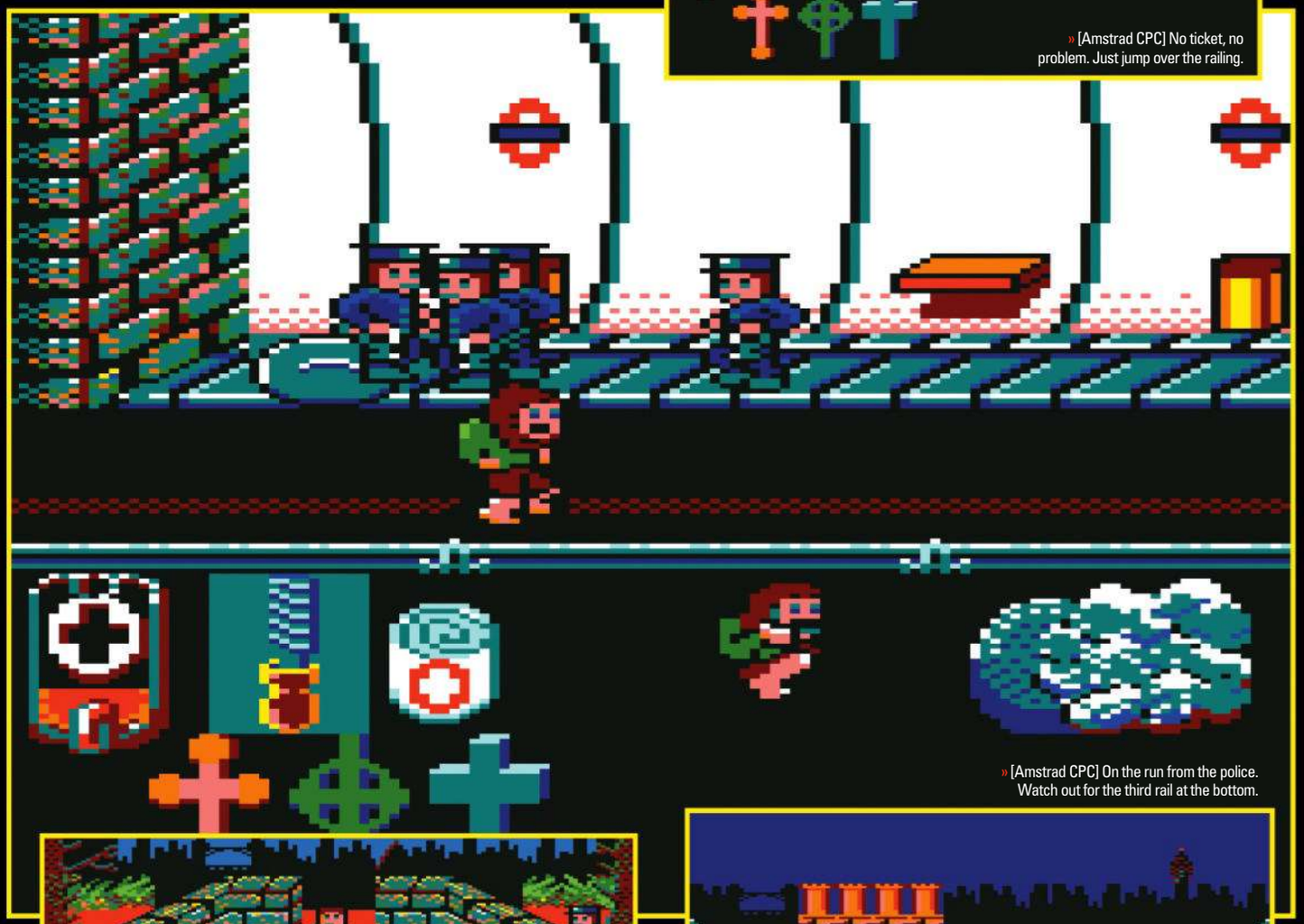
The rest of the conversions were outsourced, much to Steve's chagrin when he saw the finished results. This conversion lacks the polish of the original source. Also, in the original release it came with a frustrating game-breaking bug, when you eat the last person you need to kill, the game crashes!

C64

This is bettter than the Spectrum version, with graphics closer to the Amstrad original. It maintains the atmosphere but lacks the music, aside from a funky little number that plays when you complete the game. It's a decent enough effort, but again it doesn't reach the heights of the original source.

» [Amstrad CPC] When you're a werewolf you can super jump from one building to another.

» [Amstrad CPC] No ticket, no problem. Just jump over the railing.



» [Amstrad CPC] On the run from the police. Watch out for the third rail at the bottom.

» [Amstrad CPC] The police are all over the place and will hunt you at night, so be careful.

» [Amstrad CPC] You've transformed again. Time for another night on the tiles.

» [Amstrad CPC] The blood red of the park adds to the spooky atmosphere.

WEREWOLVES IN THE EIGHTIES

THOSE FURRY SHAPECHANGERS WERE EVERYWHERE!

So, we now know the inspiration for the game was after the 1978 Warren Zevon song of the same name, and not a movie. But just like the zombie renaissance in the past decade or so, werewolves were experiencing their own resurgence in the Eighties – kicking off in 1981 with two successful werewolf movies, *The Howling* and *An American Werewolf In London*. This was swiftly capitalised on by Michael Jackson for his wildly popular *Thriller* music video a couple of years later. He even hired the same director, John Landis, who had directed *An American Werewolf in London*. That was followed in cinemas by the underrated *Silver bullet*, the great *Teen Wolf* and the not so great *Teen Wolf Too*. Talking of sequels, *The Howling* had no less than four sequels come out in the Eighties alone. But this writer's favourite werewolf is from a film released in the same year as *Werewolves Of London*, 1987 – the werewolf from the cult classic *The Monster Squad*. Dynamite down his trousers doesn't stop him, but a swift kick in the groin will, "Wolfman's got nards!"

» [Amstrad CPC] A night in the jail awaits you if you're caught by the police.

> "WEREWOLVES IS SOMETHING I LOOK BACK ON WITH SOME PRIDE"
> STEVE HOWARD

The plot itself as Steve admits, "Took a while to think about, but was just an excuse to eat people." When asked if the blood, eating of the victims and the religious imagery (the flashing crosses) created worries over any controversy, Steve says, "We weren't too worried about what people would think. The graphic limitations pretty much sanitised things, and you could get away with a lot in those days." And with Steve writing the Amstrad version, the Spectrum and C64 versions were converted by third parties, "They had access to my source but seemed to get the balance wrong, and I don't think the Spectrum version was properly finished," Steve explains.

As Steve worked away on the master version, Paul was working on the drawing and creating all the screens which Steve joined together by typing in numbers directly into the code. "There were no drawn-out maps," Steve recalls, "just things like, back of jail goes into park, holes take you to sewers and certain screens continued from each other so went naturally together. Some screens were also reused to save memory and make the map a bit bigger." The open-world gameplay was also Steve's idea, "As I like that kind of thing. We had a few discussions on the mechanics, but things seemed to fit together quite well as we progressed." When it all came together Steve remembers that it had some good reviews, "However, before the launch it got quite a bit of hype, especially for the Spectrum version, but that got slated because that one didn't live up to its hype."

After the release of *Werewolves Of London*, the partnership worked on a couple of more games, with *Wipe Out* (the *Tron*-style game) on the Amiga and Atari ST being the most notable. However, as the time went on Steve admits, "We were just getting further in debt as those riches never turned up, so I left Paul to get out of the games industry. I didn't succeed, but ended up with a proper salaried games job. After that company went bankrupt, I spent about 20 years writing games from home again, still waiting for a title to sell big, and then about two years ago I got persuaded to work for a normal company again on titles such as *Rust*." Sadly, through time Steve lost touch with Paul and has no idea what happened to him after they parted ways, and any searches for Paul have proven unsuccessful.

"I do look back on my time with Paul with a certain degree of nostalgia", Steve remembers, "It may have ended in tears, and it was hard work, but it was fun, and I did create something that seems to have had a lasting legacy. *Werewolves* is something I look back on with some pride and is probably the game that has had the best reception of all the games I have written."

Looking back, it is hard not to admire Steve and Paul taking a gamble on themselves, although the riches never came at that time, the game that they created together is still being played and written about more than 35 years later. Not bad for something based on the song (not the movie) and made as an excuse to eat someone. Ah-oo, *Werewolves Of London*!

Peripheral Vision

ESSENTIAL GAME
THE LEGEND OF ZELDA

There aren't many games that make use of the unique microphone functionality of the Famicom's second controller, but the first entry in this classic series did. The Japanese version of the game allows you to defeat Pols Voice enemies by making loud noises, which works on every one present in the room. While some later Japanese re-releases including the 3DS and Wii U releases have successfully emulated this with their own microphones, the American release changes their weakness to arrows, though the manual retains a reference to their hatred of loud noises.

Famicom Controller fact

■ While later Famicom systems like the Sharp Twin Famicom retain microphone support in the second controller, it was officially dropped with the introduction of the AV Famicom's redesigned controllers.

Famicom Controller

» **PLATFORM:** Famicom » **YEAR:** 1983 » **COST:** N/A (launch), £15+ (today, unboxed)

Although the Famicom was the first Nintendo console to include a traditional control pad, the company had plenty of experience in designing controllers – and contrary to most companies, which drew upon arcade standards, Nintendo chose to use the expertise it had gained with the Game & Watch line. The cross-shaped d-pad from the Donkey Kong handheld was adopted, along with two action buttons, two buttons for menu selections and on the second controller only, a microphone. Both controllers are a standard inclusion, wired directly into the console, with a red and gold colour scheme to complement the system's look.

Does a controller truly count as a peripheral if it can't be detached and wasn't sold separately? Perhaps not, but we'll let that slide since the Famicom controller is one of the most influential controller designs ever, basically setting the standard for the rest of the Eighties. The NES controller looked different but only dropped the microphone function, while Sega, NEC, Atari and Amstrad adopted the d-pad and two button layout as well as the basic rectangular shape for their own consoles. *

SUPPLIED BY
EVAN AMOS

THE HISTORY OF RAIDEN

THE RAIDEN GAMES HAVE LEFT A PROFOUND LEGACY IN THE SHOOTING GAME GENRE SINCE THE VERY FIRST DEBUTED IN 1990. IT'S A SERIES THAT HAS NEVER BEEN AFRAID TO CARVE ITS OWN PATH. AND IT ISN'T YET DONE

WORDS BY WILL FREEMAN

» [Arcade] Smart bombs are an effective strategy for taking out some of *Raiden*'s bigger bosses.

When the first *Raiden* game arrived in Japan's game centers in 1990, it wasn't an immediate hit. And yet it was the beginning of a series that would leave a remarkable legacy in the 2D shooter genre, and beyond.

Make no mistake, the first *Raiden* went on to be a grand success. But on release, developer Seibu Kaihatsu was still making a name for itself. In fact, the team had begun their life making shmups, with 1983's *Stinger* and the following year's *Scion*. They'd explored the form yet again with 1987's *Air Raid*. But the team had found more success elsewhere, with the likes of gallery shooters such as *Empire City 1931* and its spiritual successor of sorts, *Dynamite Duke*. The latter was far from a flop, but so significant was its development cost, with Seibu creating its own arcade hardware system for the game, it struggled to deliver healthy returns.

The Seibu team longed for more success. And they couldn't help but notice that 2D shooters – commonly STGs (Shooting Games) in Japanese arcade parlance – were enjoying snowballing popularity at the time, as well as being relatively inexpensive to produce. As such, the team chose to focus on developing a new shooter. As noted in the materials that came with the 2006 superplay DVD *The Aces High Raiden*, *Raiden*'s inception was ultimately a financial decision; a deviation from the original plan. And yet it became an icon.

In the years following *Stinger* and *Scion*, Konami had unleashed a classic with 1985's *Gradius*, and Irem had introduced the world to *R-Type* two years later. Soon, *Raiden* would join those iconic series as defining of the form, especially in terms of being influential across the genre.

> "RAIDEN IS THE THEORY OF HOW TO GET PLAYERS TO HAVE FUN"
> TOSHINOBU KOMAZAWA

But *Gradius* and *R-Type* weren't the only apparent influence over the Seibu team's design philosophy. Sink some hours into the earlier *Raiden* games, and it feels very apparent that another iconic Japanese software house with a reputation for shmup excellence likely had a role to play.

In the years before *Raiden*'s arrival, Toaplan had released so many brilliant, important and influential shooters: *Tiger-Heli*, *Twin Cobra*, *Flying Shark*, *Truxton* and *Fire Shark* to name a few. Toaplan's story saw it gradually develop and establish what would later be known as 'bullet hell', think dense walls of gaudy ordinance, absurd challenge and confidently elaborate scoring systems. The likes of *Twin Hawk* and *Twin Cobra*, however, came long before true bullet hell, and their energetic pacing and largely stern military theming seemingly caught the Seibu team's eye (perhaps alongside Toaplan's growing success).

The early *Raiden* games share much in common with that era of Toaplan titles, from the focus on military hardware inspired by reality, to the emphasis on pushing the pace introduced by landmark scrolling shooters such as 1982's *Xevious*. Like so many Toaplan shmups of the era, *Raiden* started out with the player passing over green fields, rural outposts and clutches of buildings, all defined by crisp, detailed pixel art that endeavoured to communicate a sense of Earthly realism. *Raiden*, though, seasoned the formula with an eager sprinkling of sci-fi. Set in 2090, the game that kick-started the series tells a tale of an alien invasion of our home planet by a destructive force known as the Crystals.

» [Arcade] After a third-of-a-century of series evolution, the original *Raiden* remains an essential play for anyone interested in shmups or arcade history.

» [Arcade] The first *Raiden* game arrived in 1990, establishing a DNA that continues to define the series as relatively distinct in its genre.

» [Arcade] It might not be bullet hell, but it certainly gets hairy in the original *Raiden*.

» [Arcade] Considering its age, the first *Raiden* bristles with detail and energy, in no small part thanks to the graphics work of Toshinobu Komazawa.

» Toshinobu Komazawa worked on several *Raiden* games at Seibu Kaihatsu, including the first. He would later found MOSS, serving as producer on *Raiden III*, *IV*, *V* and more.

» [PlayStation] Despite improving on the original and tantalising players, *Raiden II* remains one of the less available series entrants.

» [PlayStation] *Raiden II* has some memorable bosses. From the first one on, they're distinct and influential.

That blend – of Toaplan-esque firm realism and the futuristic energy of *R-Type* and *Gradius* – birthed something rather special, that felt as convincing as it did otherworldly. At a glance, it's all rather serious, thematically speaking. But framing the *Raiden* games purely as works of sincerity rather belies their core offering. They are absurdly fun, exciting shooters to play. That's as true today as it was 33 years ago. And that was no accident.

"*Raiden* is the theory of how to get players to have fun. This is also its logic, or what makes it what it is," offers Toshinobu Komazawa, founder and CEO of MOSS, the Tokyo-based studio that continued to develop *Raiden* games following Seibu's gradual vanishing from the public spotlight.

"For *Raiden*, a lot of time was spent researching test-players' gameplay, and that sense of fun was acutely identified," Komazawa tells us. "This identification allowed aspects of development to be a solved problem."

In other words, the team worked hard to understand what made other games of the time fun, and carefully translated those learnings into the language of shmup design, realising something that has since become a constant of the entire series.

Why are the *Raiden* games quite so exhilarating? The answer, in part, is about pace and ferocity. Every entry in the series rarely relents, with very little downtime for the player. Each *Raiden* game plays fast, and keeps the player on their toes with all manner of competing shot styles. Weaving through a bullet curtain in a CAVE game sure takes some chops, but *Raiden*'s blend of aimed shots and thunderingly fast lines of firepower encourage a playstyle that very much keeps pilots lively.

The whole series excels in delivering close shaves, dramatic twists of fortune and turnarounds where floundering moments of survival suddenly switch to dominance over the flow of enemy craft. It's absolutely nail biting, and frequently tense. Does that sound like fun? Well, the kind of fun Seibu and MOSS' games deliver are very much roller-coaster thrills rather than wholesome chuckling. And it's a roller-coaster with a cavernous capacity for taking your own route, applying your own playstyle, and pushing at the boundaries of how shmups are meant to be played.

The first *Raiden* game was significantly successful, if not fast out the gates. Early on, coins through slots came at a less than impressive rate, but soon word of mouth – no doubt about all the fun to be had – spread with impressive energy. As success came and came, a bounty of ports and reworkings followed, including *Raiden Trad* on the Mega Drive and SNES, *Super Raiden* on PC Engine Super CD-ROM², and straight ports on everything from the Atari Jaguar to MS-DOS.

"WE STILL HAVE DISCUSSIONS ABOUT GAME DEVELOPMENT WITH THE PRESIDENT OF SEIBU KAIHATSU"
TOSHINOBU KOMAZAWA

» [Arcade] Essentially a remixed version of *Raiden II*, *Raiden DX* elevated the series' ambition with regard to looks, style and breadth.

» [Arcade] *Raiden DX* isn't anything like bullet hell. But for its time, it delivered considerable punch and pace.

» [Arcade] Here's *Raiden DX*'s toothpaste laser in full effect. It's a truly iconic power-up within the genre.

» [Arcade] The arcade spin-off *Viper Phase 1* has never quite got the attention it deserves; perhaps because it doesn't carry the word *Raiden* in its title.

» [PC] While considerably distinct from the main canon *Raiden* games, *Raiden Fighters Jet* is one highlight of Seibu's output.

» [PC] Originally conceived as *Gun Dogs*, the first *Raiden Fighters* became part of Seibu Kaihatsu's most famed series later in its development.

All that triumph convinced Seibu to make *Raiden* a true series with the 1993 release of *Raiden II*. A refinement over a revolution, the second *Raiden* game upped the visual detail and bullet count a shade, and introduced what would become the series' most famous weapon – the Bend Plasma, or to many fans, the 'toothpaste laser'. A glistening purple beam projectile that could loop all over the screen locking onto targets was something of the expert weapon of the game and a stalwart of later series entries, it encouraged a distinct playstyle that ups *Raiden*'s frenetic energy to yet another degree. *Raiden II* also dropped its predecessor's checkpoints, allowing players to assume play at the point where they last lost a ship. Those small changes tallied up to a grand improvement on the first game's brilliant foundation.

The following year came *Raiden DX*, a much deeper reworking of *Raiden II*, adding extra stages, new play modes, rearranged enemy placement, the introduction of timed boss battles and new scoring elements. *Raiden DX* really is a highlight of the early era of *Raiden* – and the wider series. It has astounding energy and mechanical nuance for its age, and utterly deserves your time.

However, despite *Raiden DX*'s brilliance, the mainline series would then vanish for almost a decade, as Seibu explored its own take on what other studios were doing with more complex, aggressive, demanding STGs. In 1995 its truly sublime *Viper Phase 1* would arrive in arcades, introducing all manner of new mechanisms, ships and ways to play. Officially a spin-off of the main series, it is often affectionately called '*Raiden* in space' by shmup devotees, and hinted at a new direction for the series.

Next came a trilogy of games originally developed to be unrelated to *Raiden*. 1996's *Raiden Fighters* and the following year's *Raiden Fighters 2: Operation Hell Dive* offered incredible speed, a dizzying array of weapons, power-ups and scoring mechanisms, and some truly luscious pixel art. Then came Seibu's 1998 masterwork, *Raiden Fighters Jet*. It's a remarkable series that is close to essential if you adore shmups. Check out In Fighting Form for more on that exquisite series.

Despite so many brilliant creations, from 1999 Seibu went extremely quiet. While many sources point to a bankruptcy, elsewhere it was said that the studio's arcade division simply disbanded. In 1993, meanwhile, Seibu graphic specialist Komazawa moved to establish game maker MOSS. In the years

RAIDEN RESURRECTION

HOW THE ICONIC SERIES IS BEING KEPT ALIVE

There hasn't been a truly new *Raiden* release since 2016's *Raiden V*. But interest in the series clearly remains, because several of the later games have been released in remastered or modernised form in recent years. And it actually started before *Raiden V*.

The brilliant *Raiden IV* debuted in Japanese game centers in 2007, before being rebirthed as *Raiden IV: OverKill* on the PlayStation 3 in 2014. The first European release of *Raiden IV*, it contained new stages, new ships, a new scoring system in OverKill mode, and the original arcade system. Then, in 2021, *Raiden IV X Mikado Maniax* saw a worldwide release to Switch, soon spreading to PlayStation 4, PlayStation 5, Xbox One and Xbox Series X/S in the years that followed. Offering up the ultimate compilation of *Raiden IV* modes and arrangements, plus a remixed soundtrack produced by one of Japan's most well-regarded arcades, Game Center Mikado.

As recently as this year *Raiden III* underwent the same treatment. *Raiden III X Mikado Maniax* again reworks the score, and offers current-gen console owners access to a brilliant, often underrated shmup. At the time of writing, the game is now available to play in all regions across console, with the Steam version due soon.

The original *Raiden*, meanwhile, came to Switch and PS4 in 2021 as part of Hamster's popular *Arcade Archives* series. We'd also love a re-release or update of *Raiden II* or its brilliant reworking *Raiden DX*. It's a game many arcade and shooter fans want to see back.

As confirmed to **Retro Gamer** by MOSS CEO Toshinobu Komazawa, there are likely to be more *Raiden* releases in the future. An entirely new series entry would be wonderful. But we can't resist pondering how wonderful it would be to see a modernised compilation of *Raiden*, *Raiden II* and *Raiden DX*, and even a current generation compilation of the *Raiden Fighters* trilogy and *Viper Phase 1*.

IN FIGHTING FORM

EXPLORING RAIDEN'S INTERESTING SPIN-OFFS

The most vibrant *Raiden* games were actually spin-offs; the *Fighters* trilogy. Starting with 1996's *Raiden Fighters*, which was followed a year later with the unrelenting *Raiden Fighters 2: Operation Hell Dive*, the trio of games reinvented *Raiden* as a faster, more elaborate entity. The sheer array of ships and weapons – including those from earlier *Raiden* games – gave players a huge variety of options to explore, and subsequently ways to play. Again, the *Raiden* series' capacity for personal flair had increased. But those two games were soon eclipsed by 1998's sublime *Raiden Fighters Jet*, which remains a titan of the shmup genre.

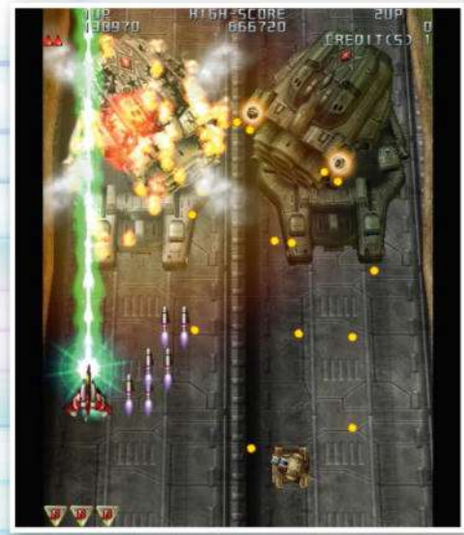
It is a game so packed with complexity and depth that it can keep you busy for years, and yet casual players can get plenty from straightforward shoot-and-dodge play. *Jet* isn't a work of bullet hell, but instead, in the *Raiden* tradition, is something distinct that happily interprets what a 2D shooter can be in its own way.

"At the time those games were made, I wasn't working with Seibu Kaihatsu, but we did start the planning phases while I was still there," offers Komazawa. "I remember in contrast to the 'theory of what makes the *Raiden* series what it is' our concept was to create a series that was fun from a stylish perspective. In the end, from a marketing point of view, we decided to have the title be *Raiden* in katakana, whereas the mainline series was written in Chinese characters. I think we felt that, by using katakana, that easygoing, fun sense that we were going for would be well-represented."

In fact, the first *Fighters* game trilogy wasn't intended to be a *Raiden* release at all. Initially developed under the name *Gun Dogs*, it adopted the *Raiden* name to pull on the series' popularity. Yet the trio have a definite *Raiden*-esque quality; a result, surely, of Seibu Kaihatsu's own founding DNA.

» [PC] *Raiden Fighters Jet* is still considered a pinnacle of the genre.

» [PS5] Adding modernised features and new soundtrack options, *Raiden III X Mikado Maniax* marks the series' most recent release.



» [PC] The first game in the series made with MOSS at the helm, *Raiden III* carefully modernised Seibu's work while respecting its heritage.

» [PC] *Raiden III* introduced the Flash Shot system to the series, encouraging players to adopt a risky, aggressive playstyle in return for increased score.

that followed, Seibu staff moved to MOSS, particularly when the latter began work on 2006's *Raiden III*, which marked a return for the mainline series.

"At the beginning, it was just me," explains Komazawa. "The main thing in my mind in starting the studio was that I wanted to develop arcade games with Namco or Banpresto, now both companies are part of the Bandai Namco Group. After that, several people from Seibu Kaihatsu joined and we created our development system. Also, basically every month, we still have discussions about game development with the president of Seibu Kaihatsu."

And so it is that Seibu is more than just part of the DNA of MOSS. Which might explain the commitment to the former's most famous series. Reportedly motivated by a sense of duty to keep *Raiden* alive at a time when bullet hell – also known as danmaku – was becoming the norm, Komazawa and his colleagues set about modernising *Raiden* without upsetting its formula.

"Compared with [the first] *Raiden*, the system for developing games was already different, but the largest change was that, by that point in time, 2D shooters were no longer in vogue, having been replaced by 3D," states Komazawa. "I think that change, which fundamentally changes things on the development side, had no small impact on the game's content."

And yet *Raiden III* feels unmistakably like a *Raiden* game. The purity, exhilarating ability to spawn fun, and the setting and central aesthetic are all in place. It also introduced the Flash Shot system, rewarding players with greater points for faster kills. That encouraged playing right at the top of the screen, trading high risk for high rewards, and upping the excitement considerably.

Raiden III also explicitly leaned into Double Play, which is a sole player taking on the game controlling both ships at once, a stick in each hand. Players had started to play *Raiden II* in this style, but had to put up with each ship

» [PC] There are plenty of challenging boss fights in *Raiden IV: Overkill*.

» [Switch] While *Raiden III* introduced explicit support for Double Play, *Raiden IV* refined the concept, letting one player control both ships for a combined score.

» [PC] Building on MOSS' work on *Raiden III*, the fourth game in the core series upped the intensity and knack for dramatic playthroughs further still.

"WE WILL DEFINITELY CONTINUE TO EXPAND ON THE SERIES"
TOSHINOBU KOMAZAWA

» [PS4] *Raiden V* is currently the last mainline game in the series. Hopefully the success of various remasters will lead to a new game.

having its own score. *Raiden III*, meanwhile? If players of the arcade original pushed the stick up and pressed the A button on both player sides for some five seconds after inserting a coin, Double Play mode was activated, giving two ships a single, combined score. But it didn't stop there. Placing one ship in the bullet stream of the other ship in *Raiden III* created more powerful shot variants. And the way enemy waves so often appear in pairs whispers to a Double Play bias.

***Raiden IV* built on *Raiden III*'s work with its 2008 release, providing a considerably polished take on what its forebear had established; including a riveting Double Play mode.** If you want the very best in the series' modern history, *Raiden IV* – or its more recent *Overkill* and *Raiden IV X Mikado* editions – is the one to go for. It's worth noting here that in 2023 *Raiden III* also underwent a modernisation and polish under the same *X Mikado* moniker.

Then came *Raiden V*, initially arriving in 2016 as – curiously – an Xbox One exclusive. The first *Raiden* not to see an arcade release, it strived to push shooters in a new direction, adding elements like shifts in zoom and viewing angle, yet it fell just short of the standards set by MOSS' previous efforts with the series.

"That was our attempt to create a new future for 2D shooters," says Komazawa. "However, the necessary time for development and development scope didn't match up and, as a result, I don't think we were able to produce the result we wanted. That said, I still want to open the way for a new era of 2D shooters."

Raiden V still brought a bounty of merits. As with every game in the series, it innovated subtly while sticking to the founding formula of purity, intensity and fun. And it appears the series isn't done. Tantalisingly, Komazawa reveals something rather exciting when speaking to **Retro Gamer**.

"We will definitely continue to expand on the series so that it appeals to and is loved by an even broader audience. Please look forward to what we have in store," implores the MOSS CEO, later adding, "In addition to *Raiden III X Mikado Maniax*, we have some new announcements this year from MOSS. 2D shooter fans; please keep looking forward to what we have on the horizon." Does that mean *Raiden VI*? We can dare to dream.

SCORING COMBOS

INVESTIGATING RAIDEN'S COMPILATIONS

If you fancy tucking into the *Raiden* series, there are compilations available. In 1995 *The Raiden Project* came to PlayStation in most regions, even getting console launch title status in the US. Combining decent ports of *Raiden* and *Raiden II*, and a scattering of then-contemporary extra features. If you're patient, today it isn't too expensive.

Years later, across 2008-2010, all three of the *Raiden Fighters* games saw a release on Xbox 360 in most regions, bringing a suite of modernisations – and an impactful patch. Again, with a little patience, it's not too pricey. And it's very much worth every penny.

Finally, in 2012, *Raiden Legacy* swooped onto Android and iOS, before seeing GOG and Steam ports in the following years. It gathered together the first *Raiden*, and the *Fighters* trilogy. On mobile it never worked wildly well, and current user reviews suggest it is no longer supported. The Windows and Mac version was initially rather lacklustre, but has been somewhat improved through patching. Never seeing a physical release, it's the cheapest option, and still available to buy new. But if you have the pennies, the solid PlayStation and Xbox 360 compilations are the way to go.

Qwak

DUCKING GOOD FUN

» RETROREVIVAL

» AMIGA » 1993 » JAMIE WOODHOUSE

When I had an Amiga I ended up owning a lot of games published by Team17. This was partly because they were often cheap, but also because a lot of its games were riffs on popular arcade games, like *Assassin* (*Strider*) or *Alien Breed* (*Gauntlet*).

One of my favourite games was Jamie Woodhouse's *Qwak* and I was delighted to rediscover it on the recent Evercade *Team17 Collection 1*. It's a truly tremendous single-screen platformer in the style of *Bubble Bobble* and it's ridiculously good fun to play. It's also incredibly charming to look at thanks to Richard Heaman's sugary-cute graphics. The pixel-art designs are quite simply excellent and full of character, while the backgrounds have the same distinctive look that made *Bubble Bobble* and similar games so easy on the eyes.

It's the mechanics where *Qwak* really shines however and it plays like *Bubble Bubble* on steroids, with Qwak hurtling around the screen as he grabs fruit and the keys that will let him move on to the next stage. There's a lovely pace and energy to *Qwak* and it comes across as incredibly slick and professional, despite the small number of people that worked on it. As with Taito's epic arcade game, *Qwak* has lots of hidden secrets to discover and there's an excellent two-player option as well, which becomes incredibly competitive as you rush around the screen to collect the most fruit.

So *Qwak* then is a wonderfully compelling game and it has been an absolute pleasure to not only revisit it on the Evercade VS but to play it with my daughter who has taken a real shine to its accessible gameplay and charming aesthetics. It may be 30 years old, but *Qwak* feels like it could have come out yesterday, a testament to Jamie's coding skills. If you've not experienced it before then give it a try. You'd be quackers to miss it.

THE MAKING OF WORLD RALLY™ Championship

CRAFTED BY A SMALL TEAM IN SPAIN WITH A BACKGROUND IN 8-BIT PROGRAMMING, WORLD RALLY WAS AN INTERNATIONAL ARCADE SUCCESS. BUCKLE UP FOR THE RIDE AS CARLOS GRANADOS RECALLS THE HAIRPIN TWISTS AND TURNS THAT LED TO THE DEVELOPMENT FINISH LINE

WORDS BY GRAHAM PEMBREY

IN THE KNOW

- **PUBLISHER:** GAELCO
- **DEVELOPER:** ZIGURAT SOFTWARE
- **RELEASED:** 1993
- **PLATFORM:** ARCADE
- **GENRE:** RACING

Carlos Granados was visiting the US on a school exchange trip when he saw a computer for the very first time. On returning to Spain, he knew more about computing than his teachers. "Sometimes they said, 'Carlos, go ahead and teach the class,' and they would just listen in!" he laughs. After gaining access to a Sinclair ZX81, he began creating simple games in BASIC with some friends. Those creations then became more advanced when the group began to use a ZX Spectrum. "In the beginning it was just a hobby," Carlos tells us. "Then at some point we got hired by Indescomp, the main company importing games into Spain."

Initially the friends simply translated games for Indescomp. "After school we would spend two or three hours working for them," Carlos recalls. "Then one summer, in 1983, we wrote our first game which was *Fred*. We released it and it went well. Then we released our second game which was *Sir Fred*," In the UK at least, *Fred* is possibly better known as *Roland On The Ropes*, the Amstrad CPC 464 launch title it was converted to in 1984.

As this was happening, Carlos had started studying physics. But he also began to realise another career was beckoning. "What started as a hobby became a business," he reflects. "We were making a living without ever having planned to. That's when we decided to start Zigurat so we could release our own games."

Zigurat Software was among the early pioneers of game development in Spain. "The first to be doing this in Spain were ourselves and Dynamic. It was very few people," confirms Carlos. The other two members of the Zigurat team were his brother Jorge, and Fernando Rada. "We each had our role," explains Carlos. "Fernando was the main programmer, Jorge was in charge

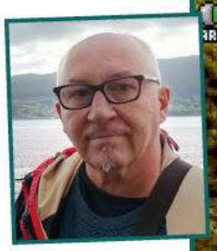
DEVELOPER HIGHLIGHTS

SIR FRED (PICTURED)
SYSTEM: ZX SPECTRUM
YEAR: 1986

SURF PLANET
SYSTEM: ARCADE
YEAR: 1997

GAELCO FOOTBALL
SYSTEM: ARCADE
YEAR: 2002

» [Arcade] Quick reactions are key to getting round each track in time.



» Carlos Granados was a cofounder of Zigurat Software and is now a contracting software developer and consultant.

» [Arcade] You have 60 seconds to complete each course. Here we've just made it.

» [ZX Spectrum] *Carlos Sainz: World Rally Championship* was the 8-bit predecessor to *World Rally.*

of graphics and I was in charge of building the tools that were needed for games. Not strictly, sometimes I did some graphics or main programming, but those were our main tasks."

Fernando happened to be a big fan of rally racing. When he and Carlos attended a race together in Portugal, it sparked an idea. They decided to ask the Spanish domestic rally champion Carlos Sainz if he would like to be the face of a ZX Spectrum racing game. To their delight he agreed, and the resulting game, *Carlos Sainz: World Rally Championship*, proved to be a big success. It then sold even better when the driver became the international rally champion. "We were so lucky to get him just before he got his big win," Carlos says with a smile.

Nonetheless, as the end of the Eighties approached, Zigurat realised the 8-bit computer market it was so closely associated with was fading. "We were in a bit of a problematic situation," Carlos admits. Fortunately, the company was thrown a lifeline when the arcade hardware manufacturer Gaelco came knocking for Zigurat's racing game expertise. "Gaelco told us, 'We're looking for some people to build games for us, would you be interested?' We said, 'Yeah we're very interested,' because we knew what you could do with arcade machines was much better than what you could do with home computers. And Gaelco were incredible, because they made hardware that was top class. It was as good as anything that Sega or Namco or any other companies could build, but they built it with just a small company in Barcelona with 30 people."

> "GAELCO WERE INCREDIBLE, THEY MADE HARDWARE THAT WAS TOP CLASS"
> **CARLOS GRANADOS**

» [Arcade] The car in your control is closely modelled on a Toyota.

Zigurat began working on what would eventually be named *World Rally.* At that point though, the intention was for the game to bear the name of Carlos Sainz (interestingly, its title screen says *World Rally Championship*). The international rally champion had again agreed to his name and likeness being used. However, an unexpected hazard appeared in the road just a few months before launch when Carlos Sainz suddenly announced he was moving teams ▶

WORLD RALLY 2

STEPPING UP A GEAR WITH THE SEQUEL

■ After *World Rally* proved a hit in arcades around the world, it was natural for Zigurat and Gaelco to create a follow-up. *World Rally 2: Twin Racing* was released in 1995 with the same core gameplay that made the original work so well: a series of winding tracks, a range of environments and a 60-second timer to beat. However, it also packed some neat technical advances. Among these was a greater level of photo realism, which Carlos attributes to improved hardware. "*World Rally 2* used the next generation of Gaelco boards, which were much more powerful in a graphical sense," Carlos tells us.

The sequel also introduced a two-player mode. One arcade board could serve two cabinets stood alongside each other, allowing two players to race the same track with a 'ghost' outline of their car appearing on the other screen.

Making the game was a quicker process this time around, says Carlos. "The first game took about two years to produce and the second around one year. But it was still a long process. It didn't sell as well as *World Rally* which had been a huge success, but it did sell well enough. We were really happy with it."

WORLD RALLY ON EVERCADE

REVIVING GAELCO CLASSICS FOR A NEW PLATFORM

When Blaze Entertainment compiled two Gaelco arcade cartridges for Evercade consoles, it worked with coin-op restoration experts including David 'Haze' Haywood. "The Gaelco hardware was handled by Peter Wilhelmsen and Morten Kirkegaard while I took duties on the software side in MAME," David explains. "It was a tough process and one which required them to source many PCBs [printed circuit boards]. This was set against a backdrop of Morten fighting his own battle against cancer, which he would unfortunately lose not long after the work was completed. It provided him with a sense of drive, but we're worse off now for not having him around, that's for certain."

The expertise of the team absolutely shows in how smoothly the Gaelco games play, including *World Rally* and its sequel, which were a natural fit for the cartridges. "First and foremost, they are great arcade racing games," says Sean Cleaver, Blaze's marketing manager. On a more personal level, Sean fondly recalls playing the games on family holidays. "As the burgeoning working middle-class person whose family began to benefit from low-cost air travel, I holidayed around the Balearic Islands in the mid-late Nineties, and Gaelco games made up many of the hotel lobby and bar arcade units," Sean recollects. "It's been great to reconnect with *World Rally* and to reintroduce these games to the world."

from Toyota to Lancia. This complicated things for Zigurat in several ways, as Carlos explains. "Toyota used a long car. Lancia used a very small car with completely different colours. We had all the graphics and everything ready, and we couldn't just go back and recreate all the graphics for the car."

The team needed to think quickly about the best way to salvage the game. "We decided that we could not release it as a Carlos Sainz game," remembers Carlos. "He just couldn't be out in a game with a Toyota car. That would have been crazy, going against his marketing and contracts." Fortunately, by changing the title and putting some cosmetic fixes into place, Zigurat got the game back on track for its big release. "If you look at the introduction screen of *World Rally*, there's a guy with a helmet. That's actually Carlos Sainz," reveals Carlos. "The helmet is a sprite that we placed on top of a Carlos Sainz graphic. If you take that out, you will see him – it's still there in the game."

» [Arcade] With time exceeded and the car upside-down, everything's gone wrong here.

Despite losing their star attraction, Zigurat and Galeco were still confident about achieving success, thanks to having done a great deal of quality-assurance testing in the best possible environments. "We would put the game into an arcade and we would see how well it did," Carlos remembers. "We would come every day at night and count, 'OK, today we made this many pesetas,' and then we did some tweaking and it was, 'Ah today we made more money.' We tweaked and tweaked until the playability felt perfect. And so we had good expectations because the results coming back from the arcades were already good. We started with one arcade, then we put it in another place in Barcelona, then in London, then somewhere in Germany. We had different testing places all over Europe."

It helped that the game looked fantastic, with photorealistic graphics achieved through a kind of rotoscoping technique, as Carlos outlines. "We had a model car that we put on a platform and we took photographs of it from 48 different angles. For some of the graphics in the background, we used photography as the source and retouched it, so it was very realistic."

More than anything, the playability of *World*

» [Arcade] The enthusiasm of these cheering fans seems undiminished by our crash.

» [Arcade] Looks like a particularly sharp hairpin bend is coming up.

Rally was hard to fault. Enjoying the game was simply a case of stepping on the pedal to accelerate and then swerving the steering wheel according to the on-screen directional arrows in time for each bend. There are hairpin turns to navigate, obstacles to avoid, and different surfaces and weather conditions to adapt to. The finishing line for each course must be reached within 60 seconds. It's not rocket science, but that's the charm. The game feels superb to play and anyone can give it a go.

"The great thing about the game, and what people like, is that it was very playable. Playability was 100%," Carlos agrees. "It was very easy to drive. With a lot of driving games, if you are a good driver then it can be a good game. But this is a game that could be played by a nanny. You just turn left and right. It doesn't need to be very precise, what you're doing. As long as you do it fast enough, you are going to be good."

All these factors combined to make the game "a huge success", as Carlos describes it, garnering great profits for Zigurat and Gaelco. Commercially, it also helped that the game shipped with an anti-piracy device built into the hardware. "We used a special chip that came from a US company, called a Dallas Chip," Carlos explains. "Part of the code was in the chip, which was encrypted. It was even physically protected so that if you tried to disassemble it, it would self-destroy. That's how we stopped people from being able to copy our game. It was really successful, and I think part of the success of the game was that we were able to stop people from making copies."

The code was so well secured, it would later prove a barrier to fans seeking to revisit the game through emulators. That could potentially have proved a problem for preserving the game, but luckily Gaelco eventually released the encryption keys and source code, meaning *World Rally* could be freely enjoyed.

Zigurat continued making arcade games until the turn of the millennium, by which point the coin-op market was in decline. Continuing to partner with Gaelco, it achieved success with early mobile-phone games. However, around 2006, Android and iOS phones began to take off and the mobile games market became especially competitive. "We decided we didn't want to be doing this anymore, because it was very difficult to break into that market," Carlos recalls. "So we split and everyone went their own ways."

After leaving the games industry, Carlos ran an e-commerce website for five years before becoming a contracting software developer and consultant, working on websites and apps, which he still does today in the aviation industry. Carlos says he loves to see that *World Rally* is still celebrated, including at some recent tournaments in Spain where fans young and old have competed to get the best time. "I'm really proud that such a small team as us was able to put out games which were as good as those made by hundreds of engineers in Japan or the United States," he concludes. "I think we did an amazing job with *World Rally* and the games that came later on, considering the resources we had." ✱

» [Arcade] Snowy tracks are particularly slippery, and hazards like these logs make it even harder.

» [Arcade] On low-visibility night-time stages, relying on directional prompts is paramount.

"WE TWEAKED AND TWEAKED UNTIL THE PLAYABILITY FELT PERFECT"
CARLOS GRANADOS

» [Arcade] Each race is preceded by a map showing where in the world you're racing.

» [Arcade] There are four rallies to choose from, each having three stages.

Hardware Heaven

SEGA
SG-1000 II
Computer Video Game
A fun-packed console designed for simple operation. This computer video game with its distinct images allows you to enjoy the maximum in playing satisfaction. Its colorful game play is sure to test your skills, sharpen your reflexes and greatly enlarge your imagination.
SG-1000 II

ESSENTIAL GAME

Doki Doki Penguin Land

Players outside of Japan are most likely to be familiar with *Penguin Land* for the Master System, but that's actually a sequel to this platform puzzle game. Your goal is to take control of a penguin and guide an egg safely to the bottom of long, vertical stages. If another animal touches the egg or if you drop it too far, it'll smash and cost you a life, but fortunately you can push stone blocks and smash ice ones to create paths and protect the next addition to the penguin family.

SUPPLIED BY
EVAN AMOS

SG-1000 II

» **MANUFACTURER:** Sega » **YEAR:** 1984
» **COST:** ¥15,000 (launch), £160+ (today, boxed), £110+ (today, unboxed)

After achieving unexpected success with the SG-1000 in 1983, Sega set about updating the design of the system. Rather than the toy-like simplicity of the original model, the new look aimed for a more high-tech aesthetic, and included some gratuitous English text extolling the virtues of the system. Storage bays on the side were built-in due to the inclusion of the new Famicom-style SJ-150 joypads as standard, rather than the SJ-200 joysticks that accompanied the original machine. Since the Sega My Card format was yet to be introduced, the system still only has a cartridge slot.

Beyond the new controller and new look, the SG-1000 II had exactly the same capabilities as the first model, which meant that Nintendo's Famicom was still superior technology. It was also beginning to pull away with greater software support than its rival, and launching just a year after the original SG-1000 and retaining the same price point did little to help Sega's cause. The significantly upgraded Mark III replaced the SG-1000 II after 15 months, and took many of its design cues from its predecessor.

SG-1000 II fact

■ The SG-1000 II and the Mark III look very similar at first glance, but have very different capabilities. Make sure you take a good look at any pictures before buying either console online!

GRAPHICS: TEXAS INSTRUMENTS TMS9918 (256X192 RESOLUTION, 16 COLOURS, 32 SINGLE-COLOUR SPRITES)
PROCESSOR: ZILOG Z80A 8-BIT CPU (3.58 MHZ)
MEMORY: 1KB MAIN RAM, 2KB VIDEO RAM
AUDIO: TEXAS INSTRUMENTS SN76489 (THREE PSG CHANNELS PLUS NOISE GENERATOR)
MEDIA: ROM CARTRIDGE (UP TO 128KB), SEGA MY CARD OPTIONAL

ULTIMATE GUIDE

PUZZNIC

WHEN TILE-MATCHING GAMES WERE TEN A PENNY, TAITO RELEASED ONE OF THE MOST COMPULSIVE AND CEREBRAL COIN-OPS OF ITS TYPE. JOIN US AS WE GET FRANTIC WITH PUZZNIC – AND UNCOVER ITS UNEXPECTED SLEAZY HISTORY

WORDS BY MARTYN CARROLL

Nothing was impervious to the *Tetris* effect. Having escaped its Russian homeland in the late-Eighties, Alexey Pajitnov's puzzle game and its falling blocks were suddenly everywhere – on computers, consoles, even in our dreams.

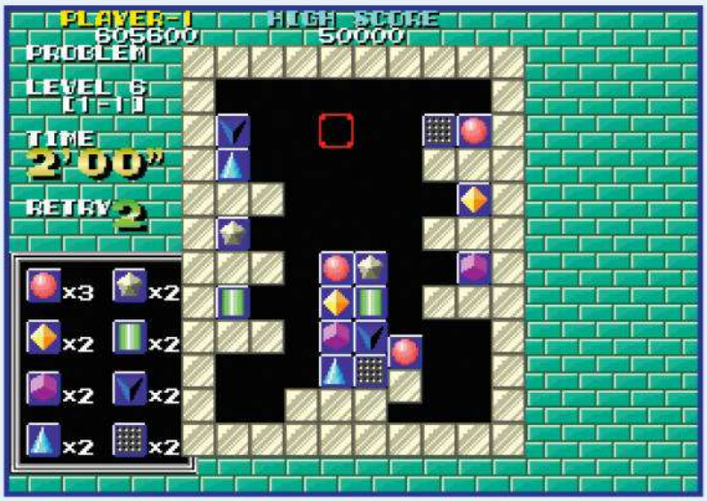
Tetris was a huge hit in arcades too, with both Atari and Sega producing coin-op versions thanks to the famously muddled rights process. And with success came the clones, including *Block Hole* from Konami, *Block Out* from Technos and *Puzzled* from SNK. Even (quasi) official rights' holders Atari and Sega created their own spins on the puzzle genre in *Klax* and *Columns*. Taito's response to the *Tetris* effect was the three Ps: *Plotting*, *Puzznic* and *Palamedes*.

In both *Plotting* (1989) and *Palamedes* (1990) you cleared screens by flinging matching tiles at each other. Tucked between these releases was *Puzznic* which offered a smarter, more composed take on the tile-matching formula. Each 'problem' featured up to eight block types which were under your direct control and could be moved freely around the screen (although gravity was present, so blocks would fall if not supported). By matching blocks of the same type they'd disappear – simple, except that most puzzles featured an odd number of block types. This meant that you needed to orchestrate matters so that a trio of the same type touched simultaneously, otherwise you'd be left with a rogue block that you couldn't remove from play and have to start over. Sometimes you'd have to build bridges and towers to bring certain blocks together, while ensuring that in doing ▶

> **"PUZZNIC OFFERED A SMARTER, MORE COMPOSED TAKE ON THE TILE-MATCHING FORMULA"**

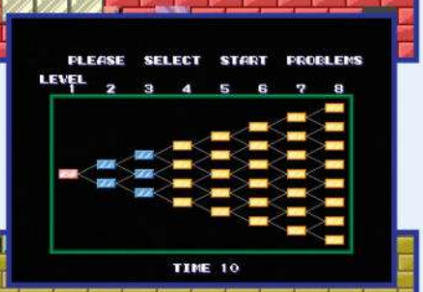
» [Arcade] Many of the early stages simply involve matching pairs as quickly as possible.

» [Arcade] Taito's *Plotting* preceded *Puzznic* by three months and shared many similarities.



» [Arcade] Later puzzles regularly feature all eight block types which you need to clear.

» [Arcade] In the Japanese and US versions, the more puzzles you clear, the more you get to see models like Tracie.



» [Arcade] *Puzznic* features 36 areas, but the branching structure means you only have to complete eight of them.

» [Arcade] Moving platforms introduce a new element to the game, helping and hindering in equal measure.

MASTERING PUZZNIC

SO YOU WANT TO BE A PUZZNIC GRANDMASTER?

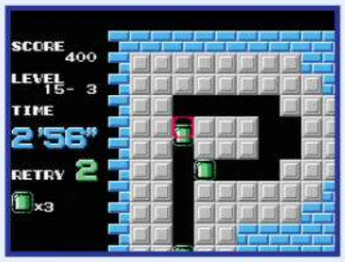
CHAIN REACTION

■ Chaining together matches can really boost your score – and looks cool too. Instead of just matching pairs, look to create opportunities for chains. Like here, on the opening stage, it's set up so that when you move the grey tile to the left, it triggers four matches.

MOVING TARGET

■ Some puzzles feature platforms that move vertically or horizontally. Often you'll need to drop a block from above so that it lands on a left/right platform and the timing can be tricky. Blocks fall about a third faster than platforms move, so use this to make a timely drop.

BLOCK DROP



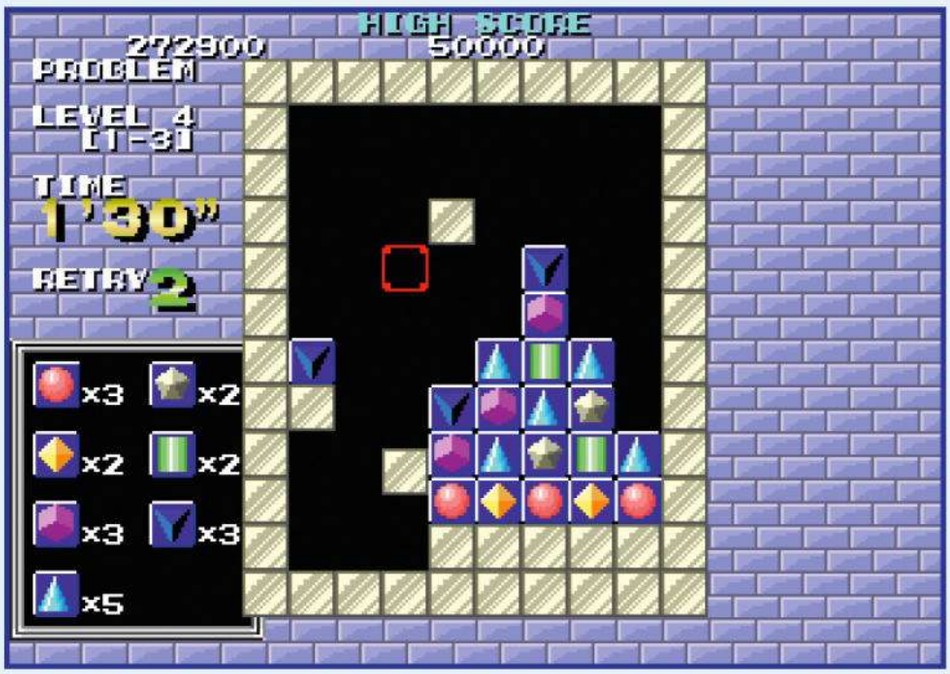
■ Matches are not made until a falling block has landed and you'll need to exploit this by dropping a block and then dropping another one while the first is falling. Like here on the NES version where you must drop the two blocks so they form a trio with the bottom one.

BOMB BLAST

■ One element of the coin-op you may be unfamiliar with are Bombs, as they are a helper feature that are turned off by default. But, if you notice a couple of fizzing Bombs at the bottom of the screen, you can use these to blast single rogue blocks from the screen.

GIMME SOME SPACE

■ All of the home versions offer a pause button, but to prevent you from cheating the playfield is hidden or obscured when paused. However, on the Amiga version you can cheat by holding down the space bar, as this pauses the timer but you can still study the puzzle.



so you didn't accidentally remove blocks that were required elsewhere. And obviously while you were sweating over the correct completion sequence, the timer was counting down in the corner. Brutally, if you buggered up a puzzle and had to restart (you were given two retries per credit), the timer carried on ticking away regardless. This was no casual game.

For forward-thinking players it was possible to chain together matches for bonus points, and many stages were built with this in mind. For example, the very first stage presents seven pairs of blocks and if you methodically matched them up you'd score 700 points. However, by carefully arranging those same blocks and then triggering a chain reaction you could instead bank 4,000 points.

Puzznic featured 144 puzzles in total, divided into 36 areas which were accessible via a

CONVERSION CAPERS

HOW THE HOME VERSIONS MATCHED UP

C64

A solid effort from Software Creations, featuring everything from the coin-op including in-game music (the only 8-bit version to do so, and also the only one to replicate the coin-op's attract mode). *Zzap!64* rated this higher than the Amiga version.

AMSTRAD CPC

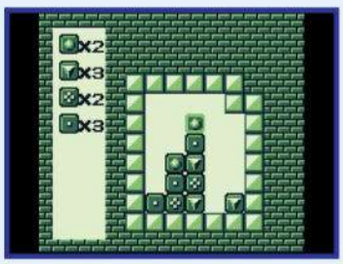
Another admirable job that uses the CPC's 16-colour mode to bring the arcade visuals to life. It lacks in-game music but otherwise no complaints here. In 2014 a fan update was released which added support for the extended CPC+ palette.

ZX SPECTRUM

Very similar to the CPC version in that it's perfectly fine but it suffers from a sparse soundtrack (even on the 128K version). And obviously the blocks are all cyan. The Speccy version of *Plotting* managed more colour so no excuse!

AMIGA

Developed by Software Creations, like the C64 version. It's very close to arcade perfect, as you'd expect. The graphics are on the right side of garish and the in-game music is excellent – although you can't select music *and* sound effects.



GAME BOY

Puzznic feels right at home on the Game Boy and this Japan-only version works well on the original monochrome screen. Unlike every other version this one features no timer, which does change the nature of the game somewhat.

PC ENGINE

This is more like a sequel than a conversion, featuring loads of extra puzzles, four different Arrange modes and lots of other tweaks including alternative block types (see screenshot). There's a whole lot crammed onto this HuCard.

PC-9801

This version retains the 'reveal' feature of the original coin-op version, but the models have been replaced by clothed anime-style girls. Overall it's a solid version which is just missing in-game music (short jingles do play between stages).

SHARP X68000

Unlike a lot of X68000 conversions this is not arcade perfect. Rather it's very similar to the PC-9801 version, benefitting only from a slight visual upgrade and in-game music throughout. The same anime girls are also featured.

branching path system. When you reached the end of a branch, the final puzzles just kept looping, with the timer speeding up, so it would come to a point when it was physically impossible to complete a puzzle in the allotted time. There was no finish, but the original Japanese version looked to provide a happy ending for players in another way. Each time you solved a problem a digitised image of a topless young lady would be slowly revealed. This feature raises… questions.

Nudity was not unheard of in Japanese arcade games. SNK's *Canvas Croquis* and Data East's *Pocket Gal* were two notable examples, but it was 1988's *Mahjong Gakuen* from Yuga (widely claimed to be an alias for Capcom) that really pushed the boundaries. Sex sells, however, and the title reportedly out-earned Capcom's own *Ghouls 'N Ghosts* which was released during the same year. This success clearly influenced Taito, but it's not clear why it was the otherwise cerebral *Puzznic* that

> **"EACH TIME YOU SOLVED A PROBLEM A DIGITISED IMAGE OF A TOPLESS YOUNG LADY WOULD BE SLOWLY REVEALED"**

received these Page 3-style extras (an update of *Qix* with its 'reveal' mechanic would have made more sense, and other publishers would later jump on that idea).

Was it a cultural thing? Well no, as the nudity was retained in the US release. In both versions, it was displayed by default, but there was a dipswitch setting to hide it, presumably as it might have looked a bit dodgy sitting between *Bubble Bobble* and *The New Zealand Story* in a family arcade. A third, separate World release for countries outside Japan and the US stripped (wrong word) all traces of the girls from the game.

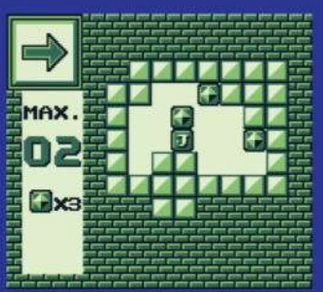
Unsurprisingly it was the non-nudey version that was adapted for almost all of the home conversions. Ocean Software had a long-standing relationship with Taito and converted *Puzznic* (and *Plotting*) to the main home-

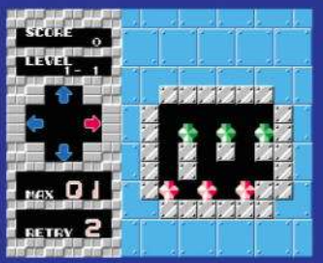
PUZZNIC GETS HEAVY MAN

DARE YOU FIGHT THE EFFECTS OF GRAVITY?

■ Not only did the NES version of *Puzznic* gain an extra 16 stages but it also included a bonus game, *Gravnic*, designed for expert players. "Are you ready for the next step?" asked the game's manual. "*Gravnic* will really test your puzzle-solving skills." As the name implies, *Gravnic* was based around the effects of gravity. Rather than moving blocks around, you now moved the whole screen which would cause the blocks to slide to the bottom. The timer was nixed, replaced by a set number of moves in which to remove every block from the playfield (as with *Puzznic*, the key was to avoid leaving single block types in play). Having no time limit meant you could carefully plan each move before executing it. In total there were 80 challenging stages to complete.

Gravnic was exclusive to the NES version, but it was destined for the Game Boy too. The GB version was only released in Japan, but in 2020 a complete yet unreleased US version surfaced which also happened to include *Gravnic*. It's unclear why the Western version was cancelled (the Game Boy really was the perfect system for it), but at least we can now play *Gravnic* on the go.





» [NES] The screen doesn't actually move, resulting in lots of head tilting.

ATARI ST

■ Not a port of the Amiga game, but instead developed by the same team behind the Z80 versions. As with those, it plays well but the presentation lets it down slightly. Music is limited to the start screen and the visuals are slightly dulled.

PC

■ PC port specialists Banana Development delivered the goods here. Visually it's similar to the Amiga version (in VGA mode at least, although it also looks fine in CGA where you can choose different palettes). In-game music is present too.

NES

■ This version is excellent, delivering a faithful version of the coin-op while adding more puzzles and the *Gravnic* bonus game. The branching structure has been ditched, replaced by a password system which improves the playing experience.

FM TOWNS

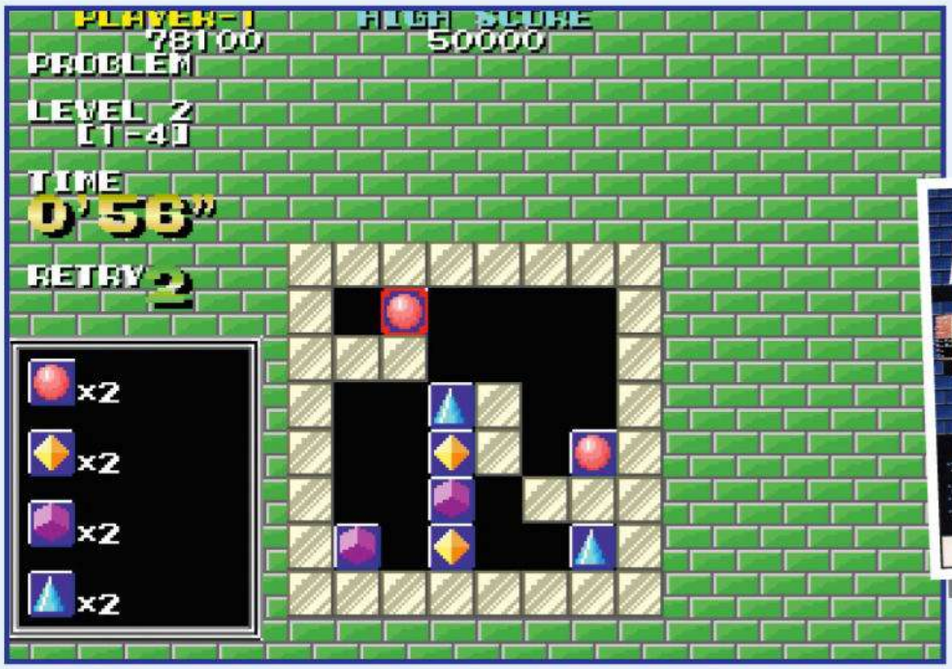
■ Now this is arcade perfect. It's a facsimile of the coin-op and even features the 'gals' in the exact same image quality and resolution. The number of puzzles is the standard 144 but it does include a construction kit so you can create more.

APPLE IIGS

■ Converted by the team that brought the *Arkanoid* games to the IIGS, *Puzznic* was finished but never released – which is a shame as it's a great version that includes its own puzzle builder. Thankfully a copy leaked out at some point.

PLAYSTATION

■ Released late in the PlayStation's life, this is a wonderful addition to the console's puzzle game library. The cutesy Halloween theme couldn't be more different from the original coin-op, but it's much more appropriate for the game anyway.



» [Arcade] So how do you match the two orange blocks? Just build a temporary tower and then collapse it.

» Taito was not shy when it came to promoting the 'girly' content on the game's flyer.

» *Puzznic* was one of many arcade games that Ocean published on home computers.

DEVELOPER Q&A

MARTIN HOWARTH CONVERTED PUZZNIC TO THE COMMODORE 64

» Martin Howarth coded several games for the C64 including *Puzznic* in 1990.

YOU'D PREVIOUSLY PROGRAMMED THE C64 VERSION OF *FLYING SHARK*. DID IT SUIT YOU, WORKING ON A SIMPLER CONVERSION?

It did make a change doing something different than another scrolling game. It had its own issues though, for example making sure the blocks were correctly dealt with on the moving platforms. Being good at the original arcade game was also a requirement, especially as we didn't have access to the actual level data. There was a lot of playing the original to gain access to this information.

SO YOU HAD DIRECT ACCESS TO THE COIN-OP?

Yes, Richard Kaye, the owner of Software Creations had some special cases built to house the coin-op motherboards, so we were able to take the units home if we wanted to get a real feel for the game. But we also played the game a *lot* in-house. Back then it was all fun and games, it was a very relaxed atmosphere.

WHAT DID YOU THINK OF THE ORIGINAL ARCADE GAME?

I didn't really have a preference on the style of games. They all had their own little quirks. *Puzznic* required you to use a little mental logic over having to use skill. These logical games are still so popular today with the likes of *Candy Crush*, one of my wife's favourite games.

THE C64 VERSION FEATURES EXCELLENT MUSIC BY GEOFF FOLLIN…

Both Geoff and his brother Tim and Mike were really good at getting the C64 to play some smashing tunes. The effects they produced really pushed the boundaries of what was possible.

HOW PLEASED WERE YOU WITH YOUR VERSION OF *PUZZNIC*, AND WOULD YOU HAVE DONE ANYTHING DIFFERENTLY?

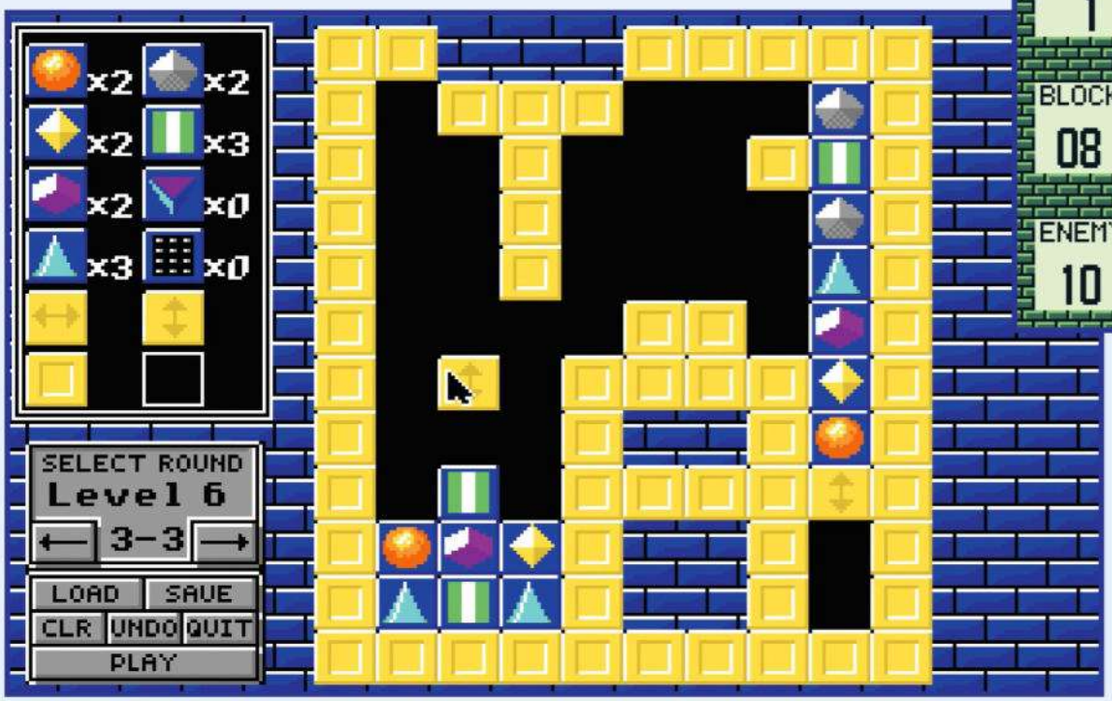
I was pretty pleased with the game overall. Most games were produced quickly so once finished you didn't really need to go back and maintain the code. I'm not sure if I'd change anything. It's sometimes nice to go over what you originally wrote to improve it. But as Ste Ruddy proved, he could throw a game together in a matter of days and if it worked then just leave it and get it out to market quicker. Whereas nowadays code is reused and improved.

DID YOU LIAISE WITH MICHAEL DELVES WHO WAS CONVERTING THE GAME TO THE AMIGA?

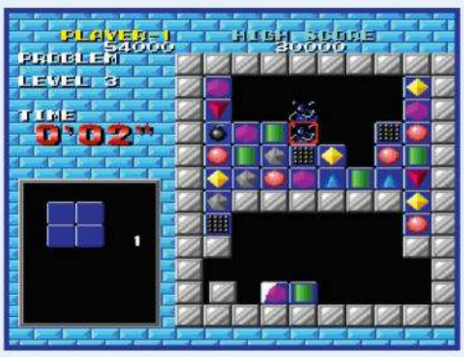
Yes, I worked alongside Mike on a number of projects including this one. Mike also programmed the C64, so he was able to look at the C64 code and directly convert it, if he wished.

THANK YOU FOR YOUR TIME MARTIN.

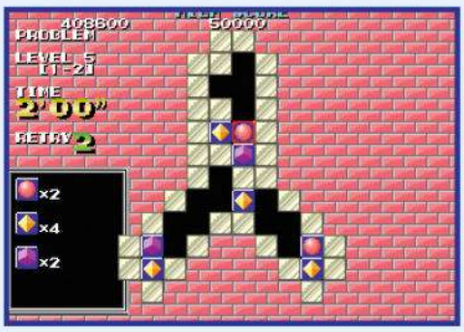
Not a problem. I love how the C64 is still being talked about decades on. Thank you for keeping it alive.

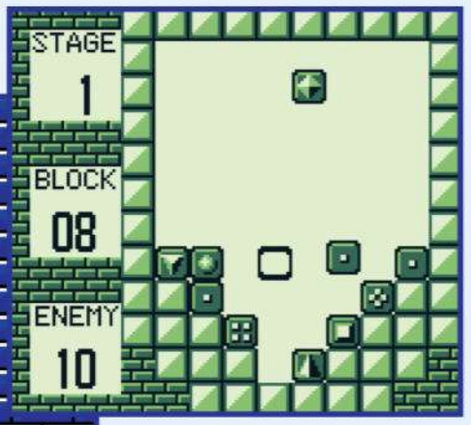


» [Apple IIGS] The unreleased Apple version features a simple, mouse-controlled construction kit.



» [PC Engine] Here's one of the Arrange modes on the PC Engine version where you have to build the shapes displayed on the left.





» [Game Boy] Link up with a pal and you get to play a *Puzznic*/*Tetris* fusion involving falling blocks.

» [PlayStation] Success on the PlayStation version involves outwitting a bunch of wacky characters.

computer formats of the day. All of Ocean's conversions were fairly faithful, featuring all 144 puzzles, while on consoles Taito took the reins and made some enhancements. The Game Boy version, which was only released in Japan, included 128 puzzles but it also featured an entirely separate head-to-head mode when two players connected using a link cable. The NES version meanwhile included 160 puzzles *plus* an alternative version of the game entitled *Gravnic* (see *Puzznic* Gets Heavy Man). The PC Engine version took things even further with 256 puzzles plus various Arrange modes evidently inspired by *Tetris*.

> ***PUZZNIC LAY DORMANT UNTIL 2001 WHEN AN UPDATED VERSION WAS RELEASED FOR THE ORIGINAL PLAYSTATION***

While the PC Engine version did not feature nudity, it did display anime girls between stages, and the PC-9801 and X68000 versions did something similar. It was only the conversion for the FM Towns Japanese computer series that featured the topless girls from the original arcade release. It also included a construction kit enabling players to easily build their own puzzles. A version for the Apple IIGS also came with a construction kit but it was never officially released despite being 100% complete.

Puzznic has spawned a number of unofficial clones over the years, including *Zeus* on Amiga and *Brix* on PC, but the title itself lay dormant until 2001 when an updated version was released for the original PlayStation console. Developed by Actron, this was the biggest yet, featuring twice as many puzzles as the arcade game (the branching structure was the same, only now each area included eight puzzles rather than four). There was now a Story mode too, much like the *Puzzle Bobble* series, where you had to challenge a series of comedic bosses who'd say stuff like, "You'll never beat me, heh heh heh!" and the whole game adopted a spooky Halloween theme. The gameplay was the same, bar one key difference: the timer now counted up rather than down, so you'd receive bonus points for completing puzzles quickly, but otherwise you could spend as long as you liked solving each puzzle.

In 2003 *Puzznic* was released for mobile phones of the era and that would be it for official releases. The game was not included on any of the *Taito Memories/Legends* collections (although its close cousin *Plotting* was) and it was missed from Taito's Egret II Mini. *Plotting* was released for the Switch's *Arcade Archives* collection in 2022, raising hopes that *Puzznic* would follow, but it hasn't happened yet. We can only assume that it has been sidelined due to those racy ladies, but why can't they just use the clean world version?

If you want to play *Puzznic* today we'd recommend the PlayStation version, which also runs fine on PS2 and PS3. The European release published by Midas can be picked up cheaply and easily online, and with 288 devious puzzles to solve, it will keep puzzle fanatics busy when they're not playing yet another version of *Tetris*.

CLASSIC MOMENTS

Forgotten Worlds

» **PLATFORM:** ARCADE » **RELEASED:** 1988 » **DEVELOPER:** CAPCOM

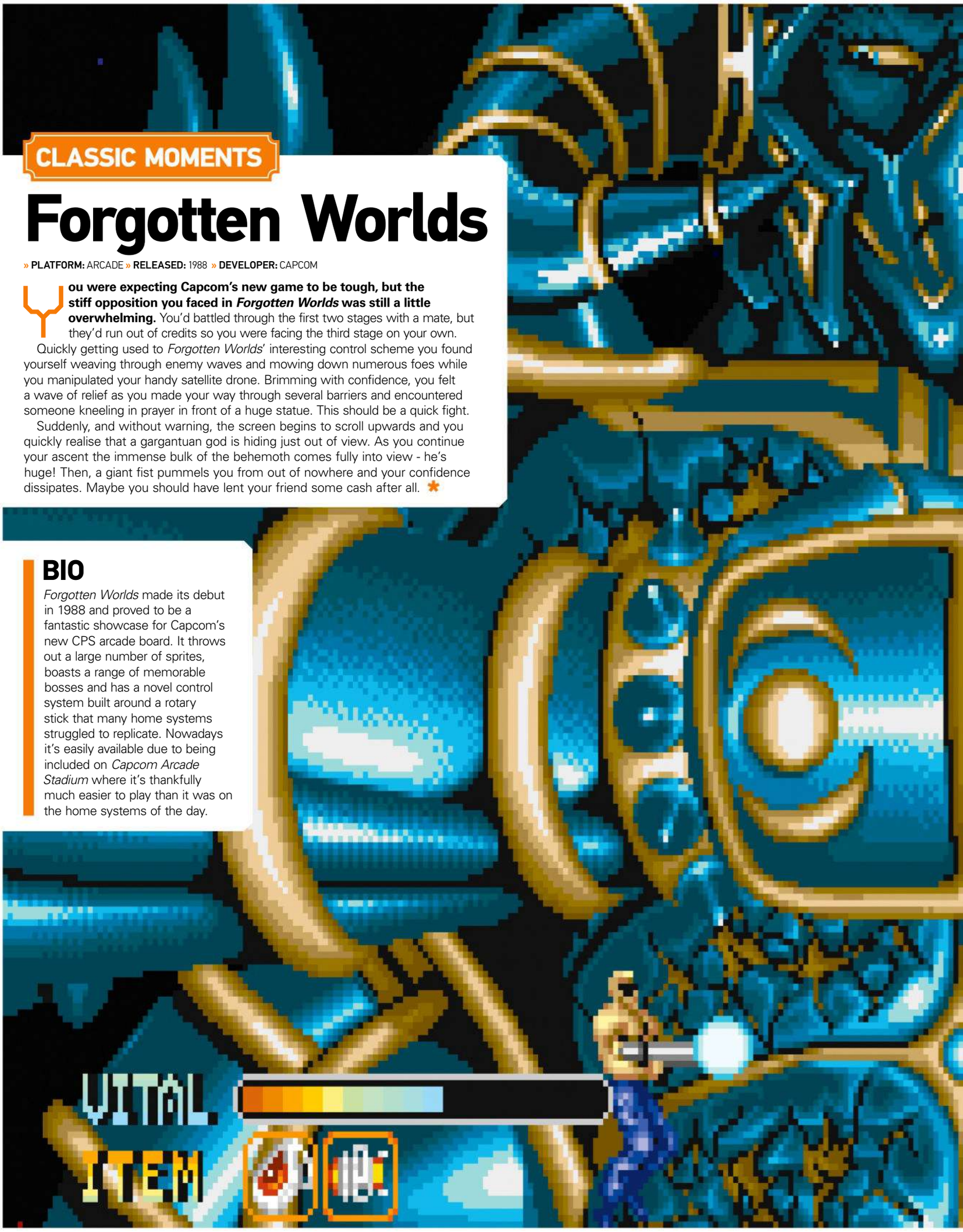
You were expecting Capcom's new game to be tough, but the stiff opposition you faced in *Forgotten Worlds* was still a little overwhelming. You'd battled through the first two stages with a mate, but they'd run out of credits so you were facing the third stage on your own.

Quickly getting used to *Forgotten Worlds*' interesting control scheme you found yourself weaving through enemy waves and mowing down numerous foes while you manipulated your handy satellite drone. Brimming with confidence, you felt a wave of relief as you made your way through several barriers and encountered someone kneeling in prayer in front of a huge statue. This should be a quick fight.

Suddenly, and without warning, the screen begins to scroll upwards and you quickly realise that a gargantuan god is hiding just out of view. As you continue your ascent the immense bulk of the behemoth comes fully into view - he's huge! Then, a giant fist pummels you from out of nowhere and your confidence dissipates. Maybe you should have lent your friend some cash after all.

BIO

Forgotten Worlds made its debut in 1988 and proved to be a fantastic showcase for Capcom's new CPS arcade board. It throws out a large number of sprites, boasts a range of memorable bosses and has a novel control system built around a rotary stick that many home systems struggled to replicate. Nowadays it's easily available due to being included on *Capcom Arcade Stadium* where it's thankfully much easier to play than it was on the home systems of the day.



MORE CLASSIC FORGOTTEN WORLDS MOMENTS

Super Shopper

Killing enemies in Capcom's game rewards you with Zenny, currency that can be spent in the shops that pop up on each stage. In addition to health upgrades and armour you can also enhance your drone with hi-tech weaponry.

Bright Spark

If you can get a mate to join you, then make sure you stay close together. Doing this creates an Aura Spark, crackling energy that enhances your firing rate for as long as you stay close to each other.

Worm Attack

Reach the second stage and in addition to air forces you'll also have to contend with huge space worms. These giant beasts attack from below and will sap your energy upon contact. As if things weren't hard enough!

Ice To See You

While he's not the most formidable boss, Iceman is certainly a memorable one. His head is shielded by gigantic chunks of ice that you'll have to annihilate before you can reach his weak spot. He's much easier to beat with a friend.

A TRIBUTE TO

BIZARRE CREATIONS

ALTHOUGH NOT FORMED UNTIL 1994, BIZARRE CREATIONS WAS JUST THE LAST IN A LONG LINE OF TRADING NAMES USED BY MARTYN CHUDLEY. MARTYN REVIEWS THE FIRM, FROM ITS EARLIEST INCARNATION AS POWERSLAVE DEVELOPMENTS TO ITS HIT PGR TITLES AND ITS CLOSURE IN 2010

Words by Rory Milne

The origins of Bizarre Creations date back to a mid-Eighties partnership between Martyn Chudley and school friend Dominic Frazer, who traded as Powerslave Developments and created *Combat Crazy*, a hard-as-nails C64 shooter/platformer.

In the early Nineties, Martyn worked under the names Lunatic Software and Raising Hell Software. During this time, he co-created the 16-bit hits *Wiz 'N' Liz* and *The Killing Game Show* for Psygnosis, where he met his future wife Sarah.

In 1994, the pair founded Bizarre Creations and began developing for the PlayStation, with two successful *Formula 1* racers being their initial output.

A subsequent release, *Metropolis Street Racer*, reviewed well but sold poorly. However, Bizarre later adapted the Dreamcast title for the Xbox as *Project Gotham Racing*, which shifted millions of copies and spawned three sequels.

Project Gotham Racing 2 incorporated a retro shoot-'em-up – *Geometry Wars*, which proved so popular that later *PGR* games continued the series, and it ultimately became a standalone franchise.

Bizarre proved its versatility further with the super-cute third-person shooter *Fur Fighters*, the 3D adventure *Disney's Treasure Planet*, the XBLA rhythm game *Boom Boom Rocket* and the ultra-violent *The Club*.

The reluctant sale of Bizarre to Activision in 2007 led to the release of the power-up orientated racer *Blur* and the Bond title *007: Blood Stone*. Sadly, these would be the firm's final titles, as Activision closed the studio in 2010. But it had a good run, made possible by its earlier incarnations and the high quality of the Bizarre Creations games that followed.

MARTYN CHUDLEY

» After developing for the C64, Martyn Chudley moved on to the 16-bit systems. He later cofounded Bizarre Creations, and gave the world *Project Gotham Racing*.

COMBAT CRAZY

C64 • 1989

You need a stop/start approach with *Combat Crazy*, in that you frequently have to hold your position to mow down foes or change direction. This latter requirement is down to the game's huge, sprawling levels, which thankfully have arrows pointing out the route you should take. Primarily, though, *Combat Crazy* is defined by its tricky platforming, its many hazards and enemies, and the variety of their attacks.

MARTYN'S MEMORIES

"I was a huge fan of Capcom's *Black Tiger*, and there were some nods to that in *Combat Crazy*. We had previously created The Powerslave Demo, based on our then company name. We had this little running man animation in that, and this little guy became *Combat Crazy*'s lead character."

THE KILLING GAME SHOW

VARIOUS • 1990

A clear evolution of *Combat Crazy*, *The Killing Game Show* has multi-directional scrolling, platforming, opponents to dispatch and power-ups to collect. Its presentation is on a different level, however, and it has more sophisticated mechanics. There's a rising tide to keep you climbing in search of the exit, but also more subtle gameplay features like lock-and-key puzzles and collection sidequests.

MARTYN'S MEMORIES

"We decided that multi-direction scrolling was the way to go, and as part of this I had the levels wrap around to give the impression you were on the inside of a cylinder. It didn't take a huge leap to realise I could fill it with water to push players upwards towards the exit."

WIZ 'N' LIZ

VARIOUS • 1993

Like so many early Nineties platformers, *Wiz 'N' Liz* is influenced by *Sonic The Hedgehog*, but it's also very much its own game. There's plenty of high-paced charging around, but unlike *Sonic*, in *Wiz 'N' Liz* you're constantly backtracking instead of following a linear path. There's also more variety to *Wiz 'N' Liz*'s collecting, which as well as grabbing power-ups and rescuing Wabbits, includes making spells with fruit.

MARTYN'S MEMORIES

"*Wiz 'N' Liz* had a huge emphasis on two players – hence Wiz *and* Liz. We wanted it to be super-simple, but with enough depth and tension for better players. Especially on the higher skill levels once you got down to ten seconds remaining and somewhere the Time Extension icon was released. Then you would have to forget everything except for finding that darn flashing ball!"

MAGICAL MECHANICS

A LOOK AT THE WACKY PLATFORMER'S GAMEPLAY

WASCALLY WABBITS

■ At its heart, *Wiz 'N' Liz* is a rescue mission. More specifically, you have to rescue all the rabbit-like Wabbits hopping around the game's levels.

MAGIC WORDS

■ Clearing *Wiz 'N' Liz*'s stages depends on spelling out magic words. This is done by rescuing Wabbits, and then collecting the letters they release.

COOL COLLECTIBLES

■ Once you spell a level's magic word, Wabbits release time-extending clocks, fruit you can make spells from and stars you can trade with in a shop.

BRILLIANT BONUSES

■ Mixing fruit in a cauldron produces spells that give you bonuses, such as extra points, subgames, palette swaps or practical jokes at your expense!

WHO'S THE BOSS?

■ You can't have a Nineties platformer without bosses, and *Wiz 'N' Liz* has its fair share, including an enraged pumpkin, the moon and a sentient tree.

FORMULA 1

VARIOUS • 1996

Because it was designed for the PlayStation rather than for the PC, the approach to *Formula 1*'s design favours fun over realism. That said, an authentic F1 experience is delivered via the game's inclusion of the constructors, cars and courses involved in the 1995 Formula 1 championship. But in terms of handling, Bizarre's title provides unapologetically arcade-like racing. There's also commentary by TV pundits from various countries, such as Murray Walker, which adds additional excitement and legitimacy to proceedings.

MARTYN'S MEMORIES

"The goal was to make an arcade sim – a game that was an accurate visual simulation of the sport that was drivable by mere mortals. The emphasis had to be on getting the controls and 'feel' just right, with enough invisible 'assists' to help players out. Another big decision was making the presentation look like the TV broadcasts that fans saw week-in and week-out."

FORMULA 1 97

VARIOUS • 1997

As well as enhancing the original game, *Formula 1 97* offers genuinely new features that its predecessor lacked. Most noticeably, it uses the PlayStation's high-resolution mode. It also has a split-screen two-player option rather than having to link up two consoles as with the original. Then in terms of fresh gameplay, there are Grand Prix and Arcade modes, giving you coin-op or realistic car handling and a stripped back or exhaustive F1 experience.

MARTYN'S MEMORIES

"We took it upon ourselves to create the 1997 game as the 1997 season was happening! We flew our art guys out to race circuits days after the teams had finished racing so we could gather as much research as possible, and then they would work their socks off to get those assets into the game."

FUR FIGHTERS

VARIOUS • 2000

Cute furry animals often starred in platform games in the Nineties, and even the odd beat-'em-up, but it wasn't until 2000 and *Fur Fighters* that they took centre stage in a third-person shooter. Not that the game relies on novelty value, however. *Fur Fighters* isn't simply a shooter with soft toys. Instead, it incorporates a rescue mission, logistical puzzles and player characters that you switch between to take advantage of their unique skill sets.

MARTYN'S MEMORIES

"We wanted to create something with a bit of a dichotomy as its key differentiator, so we had fluffy characters with guns! Jeff Lewis' amazing art really shaped the direction. Giant oversized cartoon weapons, cute enemies that exploded in fluff rather than blood, and nods to James Bond villains, including Oddfelt, a portmanteau parody of Blofeld and Oddjob."

CUDDLY COMBATANTS

THE THIRD-PERSON SHOOTER'S SOFT TOY SOLDIERS

ROOFUS

■ Leader of the *Fur Fighters*, Roofus is a hardy Glaswegian dog whose close-attack move is a head-butt. His special move is the ability to dig burrows through soft ground.

JULIETTE

■ Feline Juliette is athletic and is able to climb walls, trees and various other vertical surfaces. If unarmed in close combat she can use her claws to scratch enemies.

RICO

■ Rico the penguin can swim underwater for a considerable time without surfacing. If he's backed into a corner and doesn't have a gun he can give opponents a nasty peck.

BUNGALOW

■ Although far from the brightest, Bungalow has a mean punch and can perform acts of strength that his fellow team members can't. He can also jump twice as high as them.

METROPOLIS STREET RACER

DREAMCAST • 2000

Metropolis Street Racer's uncompromising challenge doesn't lie with the difficulty of its courses or its AI competitors. Where it really tests you is with the 'Kudos' system at its core. Kudos is primarily accumulated by using the handbrake to skid around corners or along straights. The downside being that you waste time doing so, and you're typically racing the clock or other drivers. Crucially, if you fail to earn enough Kudos in an event, when you try again you lose the Kudos clocked up on your previous attempt. That said, the thrill of street racing delivered by the game and the highly responsive handling of its cars make this steep learning curve worth mastering.

MARTYN'S MEMORIES

"Walter Lynsdale, our technical director, had worked out some really cool dynamic rendering technology where we could increase the perceived detail, particularly of buildings, so constructing cities seemed to be the way to go. The art guys were amazing, creating not only detailed and accurate versions of London, San Francisco and Tokyo, but also including numerous different, and believable, racing circuits within these cities."

STREET CRED

HOW TO EARN KUDOS IN THE DREAMCAST RACER

POWER SLIDES

■ The easiest way to build-up Kudos is by pulling on the handbrake while at speed to make your car skid.

CLEAN DRIVING

■ Avoiding crashes with other cars and the roadside gets you Kudos, although it's easier said than done.

ACING EVENTS

■ There are targets for your finishing position and lap times, and exceeding these gets you extra Kudos.

RAISED ODDS

■ The more of a head start you give rivals in one-on-one races the more Kudos you earn if you beat them.

FUR FIGHTERS: VIGGO'S REVENGE

PLAYSTATION 2 • 2001

Far more than a straight conversion, *Fur Fighters: Viggo's Revenge* departs most obviously from the original with its cel-shaded visuals. Apart from its new look, it's full of fresh content and gameplay. There's an entirely new level – Furry Forest, which includes a minigame with the Fighters' dancing drill instructor! There are new minigames, where you take charge of The Mighty Flea, a Fur Fighter that's unique to *Viggo's Revenge*. The idea being that in each minigame Mighty has to blast away the ticks living in the fur of one of the other Fighters. The PS2 title also has victory dances, new cutscenes, enemies and weapons, and redesigned versions of some of the original's levels.

MARTYN'S MEMORIES

"The goal was to do an extended version of *Fur Fighters* for PS2 to mitigate its poor performance on the Dreamcast platform. At this point we hadn't been doing anything on PS2, so creating an entirely new game felt like a bit of a waste. However we didn't just want to do a direct port, so the new content and cel-shading felt like a great compromise."

PROJECT GOTHAM RACING

XBOX • 2001

As an enhanced adaptation of *Metropolis Street Racer* you would expect *Project Gotham Racing* to have more in it, and it doesn't disappoint on that score. It has 80 cars to *Metropolis*' 50, new events where you weave in and out of traffic cones, and new ways to gain Kudos, such as overtaking rivals, doing 360-degree spins, driving on two wheels and becoming airborne by speeding over steep hills.

MARTYN'S MEMORIES

"*MSR* was notoriously hardcore – particularly the way that you challenged your previous scores, where you put your previous score at risk. Microsoft was throwing everything into becoming the next console to have from scratch, so it *needed PGR* to hit a far more casual market. Ultimately I wasn't particularly happy about compromising the integrity at the heart of the *MSR* experience, but we were 100% behind opening *PGR* up to this much larger audience."

DISNEY'S TREASURE PLANET

PLAYSTATION 2 • 2002

Based on the Disney animation of the same name, *Disney's Treasure Planet* is a non-linear 3D adventure game where you're tasked with completing a sequence of missions in order to advance. You might have to seek out and collect a certain number of objects, or chase down and catch an alien creature. There are also challenges where you ride on a solar surfboard. To help you is your sidekick Morph, who can change into helpful tools or equipment.

MARTYN'S MEMORIES

"We were blown away by *Treasure Planet*'s premise. It had masses of action and scope for limited 'racing' sections, which pandered to our *F1/MSR* and *Fur Fighters* experience. But it was a massive challenge in terms of what was expected and allowed. It was also a relatively tough production window, and we *had* to be out simultaneously with the film."

MORPH'S MOVES

AMAZING ABILITIES OF THE 3D ADVENTURE'S SIDEKICK

MORPH HAMMER

■ When Morph turns into a hammer you can use him to dispatch certain foes or whack huge pads that open entrances to new areas.

CYBORG ARMS

■ The arms Morph becomes give you the strength to smash up wooden crates, carry heavy objects and quickly take down opponents.

HELPING HAND

■ Ideal for activating stubborn switches or rotating weighty dials, Morph's Helping Hand ability does exactly what its name suggests.

GLIDER

■ Morph's Glider form is handy when there's a gaping chasm to cross, and it's actually quite speedy given its lack of engine.

JETPACK

■ You can only use Morph as a jetpack for short spells, but you can really get some height while he's firing on all cylinders.

PROJECT GOTHAM RACING 2

XBOX • 2003

With around twice as many city locations as its predecessor, *Project Gotham Racing 2* plays out on a far grander stage. An equally important evolution comes in the form of its core Kudos World Series mode, in that each of the events that it's comprised of are based on one of fourteen categories of cars. These range from relatively inexpensive models in the mode's Compact Sports Series to the highly prized and highly priced vehicles in its Ultimate Series, although it's important to note that anything faster than the most basic cars has to be bought with Kudos tokens or earned by winning races. In the follow-up's Arcade mode, you race in preset cars on preset courses, with the goal of winning medals in each event. Then in its Time Attack mode you race against the clock in any of the cars that you've unlocked in Kudos World Series or Arcade mode on either a preset track or one of your choice.

GEOMETRY WARS

XBOX • 2003

In terms of gameplay, *Project Gotham Racing 2*'s minigame shooter *Geometry Wars* sits somewhere between Atari's *Asteroids* and *Black Widow*. Its rules are simple: shoot down and dodge various geometric shapes with different attack patterns. While you're at it, you need to avoid black holes sucking everything into them. You get three lives, three screen-clearing bombs and firepower upgrades every 10,000 points. In terms of high-score chases they don't get much more compelling than this.

MARTYN'S MEMORIES

"Stephen Cakebread – Cakey – was working on an internal prototype, and part of this was 'interrogating' the new Xbox twin-stick controllers. Rather than just doing some boring routine, Cakey threw it all into a *Robotron*-style control mechanism with simple graphics. And the rest is history! More and more people were spending time at his desk playing this little oddity, which soon became something cool to put into *PGR2* as an Easter egg."

PROJECT GOTHAM RACING 3

XBOX 360 • 2005

As the fourth iteration of *Metropolis Street Racer* and an Xbox 360 launch title, *Project Gotham Racing 3* had to deliver a unique experience. It pulls this off with style, both with the far more realistic cars and tracks made possible by shifting up a console generation, and with its focus on racing supercars. The effect of basing *PGR 3* around these vastly expensive, lightning-fast works of art is to give the player a glimpse into another world, albeit a virtual one. Then in terms of challenges, several new events complement returning favourites, and these are grouped into sequences of races that play out in one of four cities.

MARTYN'S MEMORIES

"*PGR 3* was an Xbox 360 launch title, so we needed to step it up a notch with the visuals, and supercars seemed to fit with that. We had an order of magnitude more polygons and shaders to play with for the vehicles, so instead of playing the numbers game of how many cars there were we focussed on the quality of how the cars were represented."

EPIC EVENTS

THE SUPERCAR RACER'S COOLEST CHALLENGES

TIME VS KUDOS

■ A race to complete a lap against the clock, with a twist. The initial time given isn't enough, but earning Kudos gives you additional seconds.

ELIMINATOR

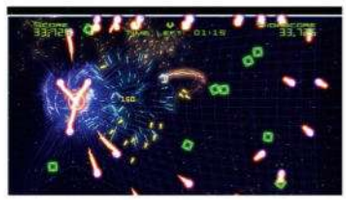
■ As its name suggests, an Eliminator challenge eliminates the slowest driver at the end of each lap. To win just make sure you aren't eliminated.

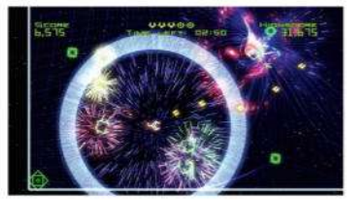
DRIFT CHALLENGE

■ You have to accumulate a certain amount of Kudos by drifting in these challenges, but you only get a short section of track on which to do so.

BREAKTHROUGH

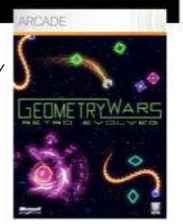
■ In Breakthroughs, a timer counts down as you race through a series of checkpoints. Each time you get to one you get some precious extra seconds.





GEOMETRY WARS: RETRO EVOLVED

VARIOUS • 2005



Bizarre's XBLA release allows you to play the original *Geometry Wars* or its follow-up *Geometry Wars: Evolved*. In order to differentiate itself, *Evolved* has a playfield that's larger than the screen, and this scrolls around to keep the player visible. It also has a grid background that deforms to reflect the on-screen action. In terms of fresh gameplay, it introduces pinwheel and snake-like foes, and at every 10,000 points you get a weapon upgrade that increases your firepower.

MARTYN'S MEMORIES

"This was 100% Cakey. He had an absolute vision for the game, and he had complete creative control. That was why the game was so popular – we didn't let it get watered down by other people's opinions. We'd seen that happen so often, with games' purity getting destroyed by committees, and unwarranted feedback and pressure. We believed in Cakey, so we just took a step back and enjoyed the journey!"

BOOM BOOM ROCKET

XBOX 360 • 2007

A big part of the appeal of the *Geometry Wars* games comes from their brightly hued explosions, and while *Boom Boom Rocket* is a rhythm game rather than a shoot-'em-up it nevertheless taps into this celebration of things going bang in Technicolor. Your goal is to set off fireworks in time to classical music, with successfully timed explosions adding to an energy bar/score multiplier that drains when you get your timing wrong. If it drains completely then it's game over, but if you make good progress then new songs are played and new fireworks are unlocked.

MARTYN'S MEMORIES

"EA was being extremely aggressive with their 'hiring' policy, so rather than risk losing staff we approached them with the idea of doing a Live Arcade game in a similar vein to *Geometry Wars*. My brother Chris Chudley had written the soundtracks for the *Geometry Wars* games, so he and Ian Livingstone were roped in to create 'funky' versions of classical and other royalty free music for the game."

PROJECT GOTHAM RACING 4

XBOX 360 • 2007

The product of a drive to create something genuinely innovative, *Project Gotham Racing 4* adds new features to every aspect of the series. Its most obvious introduction is weather, which sounds boring. But consider that rain, ice and snow dramatically affect road handling, turning ordinarily straightforward to drive tracks into treacherous ice rinks or aquaplaning nightmares. Another of *PGR 4*'s firsts is the addition of motorbikes, which you can race against cars as well as other bikes. It's also worth mentioning the follow-up's new modes, which include a vehicle-based version of the playground game Bulldog, and Cat And Mouse, where high-performance cars have to obstruct and damage far less impressive models.

MARTYN'S MEMORIES

"We never held features back unless we were forced to, and I think in many ways that contributed to our games being packed with so much innovation. So as well as bikes we threw in other new features such as extreme weather."

RIGHTEOUS RIDES

THE COOLEST VEHICLES IN BIZARRE'S FINAL PGR GAME

ASTON MARTIN DBR9

■ Capable of going from 0 to 60 in 3.4 seconds, the DBR9 won in its class at Le Mans in 2007 and 2008.

DUCATI 999R XEROX

■ The very best of Ducati's 999 series of bikes, the 999R Xerox has a blistering top speed of 174mph.

ARIEL ATOM 300

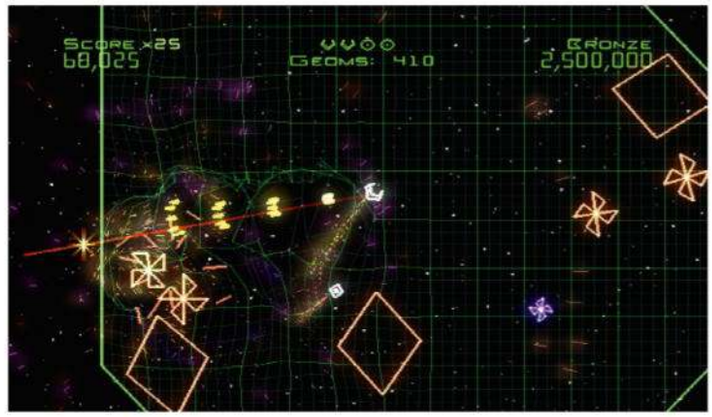
■ Produced in Somerset, the Ariel Atom 300 is best described as a go-kart with a rocket for an engine!

FERRARI FXX

■ Designed purely for track use, Ferrari's prototype can reach 60mph in 2.77 seconds and hit 214mph.

KAWASAKI NINJA ZX-14

■ Electronically limited to top out at 186mph, but with that comes excellent stability at high speeds.



GEOMETRY WARS: GALAXIES

VARIOUS • 2007

As the first standalone entry in the *Geometry Wars* series, it follows that *Galaxies* would have more content than its predecessors. But even taking this into account, it massively over-delivers in terms of features, modes and mechanics. The most obvious new aspect of the game is a drone sidekick that you can attribute one of eight behaviours to between levels, including Attack, Defend, Bait and Collect. If it's set to Bait, it lures foes away from your ship, and if tasked with collecting it zips around gathering up Geoms released by fallen enemies. Geoms are another of *Galaxies*' innovations. They're required to unlock drone behaviours, and all but the first few of the many planets in the follow-up, which are effectively the game's levels. Additionally, amassing Geoms boosts your score multiplier and earns you extra lives and bombs. Also worthy of note are *Galaxies*' new opponents and hazards, which include indestructible geometric obstacles, huge foes that split into smaller versions of themselves and indestructible black holes.

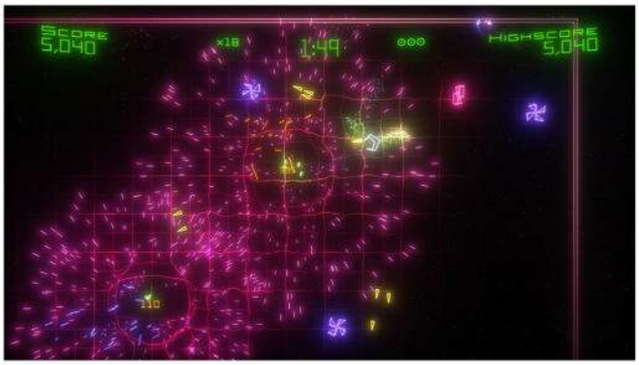
THE CLUB

VARIOUS • 2008

Easy to describe but difficult to explain, *The Club* is a third-person shooter that fuses elements of racing games with aspects of run-and-gun titles. This makes more sense when you realise that the objective is typically to get from one end of an environment to the other as fast as possible while shooting opponents to pieces. Then there's its score multiplier, which depends on rapidly making multiple kills one after another, which doesn't sound like a racing game trait, but is actually a lot like pulling off Kudos combos in the *PGR* titles.

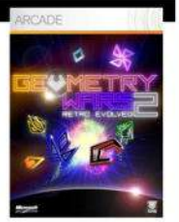
MARTYN'S MEMORIES

"During a long meeting some prawn sandwiches were provided. We probably left them standing too long before eating them, and that night I was violently ill. But along with that came this mad idea of an arcade-style shooter with a highly competitive score-based shooting challenge. Similarly to Kudos, this was about maximising scoring potential by shooting targets as efficiently and as stylishly as possible. It was diluted a little by Sega insisting we add characterisation and story line, but the overall concept is one that I am extremely proud of."



GEOMETRY WARS: RETRO EVOLVED 2

XBOX 360 • 2008



The fifth *Geometry Wars* title really delivers on variety. More specifically, it has a wealth of entertaining modes to explore, including *Project Gotham Racing 4*'s Waves minigame and an Evolved mode that's similar to *Evolved 2*'s predecessor. Of more interest are the modes created especially for the sequel: Deadline, King, Pacifism and Sequence. Deadline tasks you with accumulating as many points as possible within a three-minute limit, while King sees you hopping from one shrinking safety zone to another. You don't have weapons in Pacifism, so its technically an avoid-'em-up! Lastly, Sequence is a set of levels that gives you 30 seconds to clear every enemy without dying.

MARTYN'S MEMORIES

"For fear of sounding like a broken record, this was all Cakey again! After the success of *Geometry Wars: Retro Evolved*, having multiple game styles within a single product seemed to be a natural step for the franchise to take. These modes could be completely independent of each other, and therefore unique. They could be balanced and tuned to maximise the gameplay of each one, while still fitting the overall cohesive visual and control style of the game."

BLUR

VARIOUS • 2010

Bizarre's uber stylish combat racer *Blur* effectively continues the *PGR* series. Its power-ups are mainly weapons, with the others being a nitrous boost, a repair pick-up and a shield. You can carry three simultaneously, and use or discard them as required.

MARTYN'S MEMORIES

"*Blur* was born out of trying to add something new to the racing space. *Mario Kart* was a perennial favourite with all ages, and we thought we could get away from the sterility of the *Gran Turismo* and *Forza* franchises with power-ups as our differentiator. I was put on 'gardening leave' before its completion, but I truly believe that *Blur* was a fitting end for Bizarre's racing legacy."

007: BLOOD STONE

VARIOUS • 2010

It's impressive how *007: Blood Stone* feels like a *Bond* game while at the same time reflecting Bizarre's legacy. Its aiming and shooting mechanics are pure *GoldenEye*, but it has elements of exploration and high-tempo firefights that bring to mind *Fur Fighters* and *The Club*. There are even car chases that channel the *PGR* titles. So notwithstanding that Bizarre didn't intend *Blood Stone* to be its last game, it's a worthy swan song nevertheless.

A TRIBUTE TO STEVE RIDING

MARTYN'S MEMORIES OF THE POPULAR PRODUCER

"Steve Riding was a senior game producer who sadly passed away earlier this year. I first met him when I was working in the Psygnosis offices in 1988. During my time there I created *The Killing Game Show* and *Wiz 'N' Liz*, but I also worked with Steve on side projects like the Psygnosis Animation Player, disk protection code, *Lemmings* levels and a *Beast* port. With his playfully sardonic wit, Steve soon became a great friend, and a massive influence on myself and Bizarre, particularly during the PlayStation *F1* days. Steve acted as a buffer between us and the 'corporate' side of things, and was our go-to for 'acquiring' everything we needed to get the job done. He also contributed to the game's content directly – I remember him getting us to use a spare controller button to 'look behind'. It was kinda obvious, but it hadn't been done before because we lacked the rendering power for drawing any sort of mirrors! He will be sorely missed."

Tobal No 1

HARD KNOCK LIFE

» PLAYSTATION » 1996 » DREAMFACTORY

Do you ever feel like a game has been unjustly forgotten? I often do, and *Tobal No 1* stands as a particularly notable example. Why? Well, for a start you probably know the game's character designer Akira Toriyama from his work on *Dragon Quest*, *Chrono Trigger* and his massively successful *Dragon Ball* franchise. Director and designer Seiichi Ishii had just performed the same roles on the first two *Tekken* games at Namco, and had been a co-ordinator and designer on *Virtua Fighter* before that. Main programmer and designer Toru Ikebuchi had worked with Ishii as the main programmer on *Virtua Fighter*, and stayed in that role for *Virtua Fighter 2*.

While it's not a groundbreaking game in the same way those previous fighting games were, the action in *Tobal No 1* is well ahead of contemporaries like *Battle Arena Toshinden 2*, with strong fundamental design and an impressively rounded grappling system. The game's unusual graphical style has also aged gracefully, with the developers eschewing texture mapping in order to achieve a high resolution and framerate, and the soundtrack is legitimately excellent – just have a listen to *Disused Mine* for a taste of how good it is. There's even some extra meat on the bone thanks to the game's Quest Mode that has you exploring RPG-style dungeons.

Tobal No 1 received strong reviews, and sold over 750,000 copies in Japan alone. So why has the game been forgotten? Well, it could be because most of the people who bought it had little to no interest in it. This was Squaresoft's first PlayStation game, and it came bundled with a demo of *Final Fantasy VII* that drove the bulk of the game's sales in Japan. It fared markedly less well internationally, so *Tobal 2* remained exclusive to Japan. That's a shame, because both games deserve to be recognised for what they are – two of the most interesting fighting games to have originated on the PlayStation.

PUSH START BUTTON
CHUJI

THE MAKING OF BioForge

EVERYONE KNOWS ORIGIN SYSTEMS FOR ITS WING COMMANDERS AND ITS ULTIMAS – BUT THE ONCE GLORIOUS GAMES COMPANY HAD MANY OTHER GREAT TITLES UP ITS SLEEVE, SOME OF WHICH HAVE BEEN LOST IN THE MISTS OF TIME. LIKE BIOFORGE FOR EXAMPLE...

WORDS BY PAUL KAUTZ

There are some buzzwords, like 'multimedia' that dominated the gaming culture in the Nineties. But the one word that was even more ubiquitous than that was 'interactive' – absolutely everything just had to be interactive and, if possible, an 'interactive movie'. Which in reality usually meant cheaply produced postage-stamp sized, direct-to-video quality level clips on CD-ROM, giving the player only the lowest possible level of actual interaction.

Ken Demarest, who started work at Origin in 1990, had a different point of view on the matter, as he came from the technological side of things: as a coder on *Wing Commander* and the lead programmer on *Ultima VII: The Black Gate*, he saw interactive movies as a chance to create games that were as movie-like as possible without reducing the players to mere spectators. The key element for him were 'synthetic actors' – virtual characters who behaved like their real-world counterparts, only exactly when the players wanted them to. Logically, the game's working title was *Interactive Movie 1* – later to be changed to *Green Guns* and ultimately *BioForge*, with Ken taking on the roles of director, chief programmer and motion-capture model.

The first *Alone In The Dark* game, released in 1992, went in the direction Ken had in mind, "[*Alone In The Dark*] provided a lot of inspiration, but we believed that we could outstrip their technology. I think we succeeded in that regard," he tells us. And so he and his team of about ten developers went to work: the technology alone took about two years to create, as most of it had to be built from scratch. Ken wanted motion-captured animations, parts of the story had to be told in real-time cutscenes, the world had to function according to real-ish physics, the game should not show any in-game HUD – all of that was unheard of at the time, so everything had to be pioneered. We're still talking about the early to mid-Nineties, so the graphics needed to be rendered in a crummy VGA resolution (320x200 pixels) without the aid of any 3D acceleration whatsoever.

The result was that the severe technical limitations of the DOS machines very much dictated the game design: there was simply no way to show more than three polygonal, fully textured characters at a time in any given scene – so the scenario was written to be the desolate moon Daedalus somewhere in the outskirts of the universe. A moving camera was not possible as the background had to be pre-rendered – and so interesting camera angles were chosen to maximise the impact of each scene. And even though the animations were

» [PC] *BioForge* presents a lot of highly advanced graphical effects for its time.

» [PC] The clunky controls make for a lot of frustration and take quite some time to get used to.

» [PC] You don't have to fight all of the enemies – some of them (like the giant Cryo-Tank Scorpion) are invincible and have to be dealt with in other ways.

"[ALONE IN THE DARK] PROVIDED A LOT OF INSPIRATION, BUT WE BELIEVED THAT WE COULD OUTSTRIP THEIR TECHNOLOGY"
KEN DEMAREST

KEN DEMAREST

■ *BioForge* was "a Ken Demarest game", according to its credits. After this, he created *NetStorm: Islands At War*, worked at Paypal and Twitch, and is now retired.

BILL ARMINTROUT

■ After Origin he worked at games companies such as Psygnosis and Vicarious Visions, all the while running his personal website theminiaturespage.com

» [PC] It's not exactly *Tekken*, but *BioForge*'s fighting system has a lot of depth for an action adventure game.

motion captured, they were still stiff and rigid – so the hero became a clunky cyborg.

That hero is called Experimental Unit AP-127, but you soon find out that his name is actually Lex. But that is pretty much all you know about him at first – he himself has absolutely no idea who he is, where he is and why any of this is happening. Following the two-and-a-half minute long introductory movie featuring an unconscious prisoner, a sadistic-looking man and a really big circular saw, he wakes up in a hospital bed as the earth shakes around him. A nursebot immediately buzzes towards him, announcing, "Subject must stay in bunk. Recuperation is mandatory," and tries to send him back to sleep. The player quickly learns how to punch and kick which sends the robot into the cell's electrical barrier, disabling it and allowing Lex to walk around freely.

B*ioForge*'s story, written by Origin veteran Jack Herman, remains one of its strongest points: the player quickly discovers that the evil-looking person in the intro is Dr Mastaba, local leader of the Mondites – a religious cult that believes in transhumanism, by force if necessary. What Lex's role is in all of this is something that is hidden in walls upon walls of text that fills computer terminals, logbooks, Lex's personal journal that he updates constantly and even an additional Field Personnel File that is part of the game's box. It is quite a lot, and the game's futuristic VGA font doesn't make it easy to read, but it is worth it. And sometimes even necessary, as security codes, required for some of the game's puzzles, are usually hidden in text logs. Also they are randomly generated with each new game run, so looking them up in a walkthrough does not help.

Much more time is spent in *BioForge* fighting. Pressing the 'C' button puts Lex into the combat stance where a combination of the Ctrl, Alt and number pad keys (there is no

SHINY NEW TECH

REVISITING BIOFORGE'S TECHNOLOGICAL INNOVATIONS

REFLECTIVE SURFACES

■ *BioForge*'s reflective surfaces are one of the earliest examples in computer games. Some of the enemies can only be dealt with by bouncing laser blasts off walls and hitting them indirectly – which can also mean that you shoot yourself when the shot ricochets right back into your face.

MOTION CAPTURING

■ *BioForge* was one of the first computer games whose animation was based mostly on motion capturing. As those systems were still in their infancy back then, Ken Demarest had to create his own 3D tools, animation systems and even capture suit, while most of the performance work was being done by Starr Long.

REAL-TIME CUTSCENES

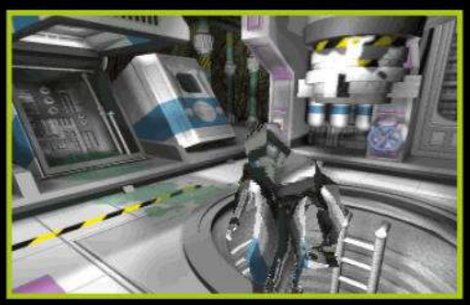
■ *BioForge* was one of the earliest computer games to feature scripted real-time story cutscenes – even though there's very few of them, the most important of which features Lex meeting Dr Mastaba in person for the first time. It's slow, clunky and sparsely animated but impressive pioneer work nonetheless.

» [PC] Save often, save early, save in different slots – death comes quickly and without warning in *BioForge*.

» [PC] *BioForge* ends on a major cliffhanger – which *BioForge Plus* wasn't going to resolve.

ZERO-G ENVIRONMENTS

■ Later in the game, Lex has to zip through high-speed tunnels which eventually lead him into a zero-G room with a pulsating star in the middle pulling him towards it – a room that he can only traverse by shooting his gun in the opposite direction and using the weapon's recoil as thrusters.



THE REFLECTIVE SUIT

■ Towards the end of *BioForge*, Lex has a final confrontation with Drogg. After winning this fight, he picks up a Mirror Suit Device from his opponent's corpse, which he can use to make himself invisible. This effect turns all of his textures into glass-like surfaces, refracting the environments in real-time.

NO HUD

■ *BioForge* features no HUD at all. You can open the Diagnostics menu to check the status of your health – but it's much easier and way cooler to see the textures on your body change from pristine to bloody mess, Lex's posture becoming fragile and his walk turning into a heavy limp after a particularly brutal fight.

gamepad support) gives him a dozen attacks. Lex has access to uppercuts, a head-butt or even a roundhouse kick, which all must be used strategically to take out the humanoid and mechanoid enemies. Not all of them need to be fought though – actually there's only one human, one alien and a few robots that you absolutely have to mess with. Everything else can either be avoided or dealt with in some other way. Like the Cyberaptor, which needs to be stunned and fed to a giant scorpion monster. Or the Acid Beast, which can only be harmed by a missile fired from a downed marine dropship.

In any case, *BioForge*'s difficulty level is quite high, even on the easiest of its three settings. You can easily fall to your death by taking a wrong step into an innocuous-looking corridor, be gunned down for simply stepping out of an elevator on the wrong floor, or be murdered by the mysterious Cryo-Tank Creature that you only get to see if you shock-freeze it while it's fighting the Cyberaptor – playing through *BioForge* involves a lot of trial and error. You can almost always save your progress, though, and it is highly recommended to keep multiple save games. Especially as it is possible to ruin the game's ending by overusing a battery that needs to hold a certain level of charge in order for Lex to be able to leave Daedalus.

» [PC] The blue-skinned Caynan is the first true enemy you meet – and you can hit him with his own severed arm!

But even if you do everything absolutely right, *BioForge*'s ending will always bring it all to a screeching halt: Lex and the surviving members of an ancient alien race called Phyxx barely escape the exploding moon. Dr Mastaba also manages to flee with the abducted Dr Escher in tow, who is to be his next test subject. But then what? According to Ken the ending was left wide open on purpose, because after the long and arduous development of *BioForge* a sequel seemed like a no-brainer. The problem was that *BioForge* didn't sell well at all. And while some reviewers went out of their way to praise the game (like a whopping 95/100 in *PC Zone*), others were less enthusiastic: 3/5 in the *NEXT Generation*, 7/10 in *Edge* or a C+ in *Electronic Games*, which called it "half-baked sci-fi", didn't help to raise the game's profile.

» [PC] Most of *BioForge*'s puzzles are quite obscure and demand a lot of trial and error to solve.

> "BIOFORGE PLUS WENT FROM ZERO TO BETA IN LESS THAN TEN WEEKS"

Thus *BioForge Plus* was born: an add-on that would expand the story a bit, bring in some extra cash and bridge the gap to a future *BioForge 2*. The catch: it had to be developed in less than three months, in order to cost as little as possible and be released in time for holiday season 1995. All without the help of Ken Demarest, who had left Origin by then. That seemingly impossible task landed on the desk of Bill Armintrout, who was part of the original *BioForge* development team and had to quickly assemble a new crew to create the add-on as several of the original software engineers and the lead artist had left for other projects, "There needed to be more sales of *BioForge* to justify *BioForge 2*, and Origin hoped that *BioForge Plus* would spur those extra sales. The concept was that *BioForge Plus* would simply be new data and art for the *BioForge* game engine, with minimal scripting/programming."

The impressive thing is – the team actually managed to pull it off! *BioForge Plus* went from zero to beta in less than ten weeks, there were adverts in gaming magazines, promising a completely new environment (the spaceship Black Raven), improved enemy AI, expanded combat and a Gauntlet Mode. But the release never came, mostly for technical reasons: *BioForge Plus* was designed as an add-on that hooked directly into the main program, not as a standalone product. But while the original *BioForge* didn't have any major technical problems, combining it with the newly developed content for *BioForge Plus* made for an extremely unstable experience. According to Bill, the development team, "Ran into an engine-level bug that had not exposed itself when *BioForge* was tested. NPC characters were getting stuck in the environment, which would

» [PC] *BioForge Plus* offers a brand-new scenario: the space ship Black Raven.

break the game. What was unusual was that you could run into the problem on one computer, save the game, take it to another computer, and the problem would not be reproduced. We only had one software engineer on our team, who had not worked on this part of the engine previously, and he did not have a solution. It must have been in *BioForge 1*, as we made no engine changes. The advantage we had with *BioForge Plus* is that we knew what the features of the game engine were, and took full advantage of them. That possibly was what flushed out the bug."

This problem would have been solved with additional development time. But unfortunately, at the same time, Origin Systems was in troubled waters: The development of *Wing Commander IV: The Price Of Freedom* took longer than expected and was way over budget, so all unnecessary products, especially those that were add-ons to flopped games, were cancelled. The *Ultima VIII* add-on *The Lost Vale* was hit by this hammer in 1994, as was *BioForge Plus*, whose entire production unit was shut down unceremoniously before it could hit the market.

Nevertheless, the game exists. Not in any official capacity, but some former Origin employees, well aware of the company's notoriously sloppy backup habits, managed to save the final beta of *BioForge Plus* before it was condemned to the storage dungeons of publisher Electronic Arts. We managed to find one such person who owned a version, and played it as far as its shaky stability would allow. And what we've learned from that experience was that the game was far from finished: The interior of the Black Raven was still very unpolished, most of the machinery and computer systems were either unusable or extremely cryptic – and the few enemies that roamed the halls and corridors of the ship were invincible titans: one with a blood-smeared chainsaw on one limb and a big laser gun on the other, another one with a huge axe for a hand, forcing Lex to be constantly on the move without having a chance to defend himself. We probably would have gotten that chance later on, after finding a few of the new melee weapons and guns, but the constant crashing of the game unfortunately never let us get that far.

At least Gauntlet Mode worked well: a survival mode pitting Lex against a stream of increasingly tough opponents from the main game and the add-on, with an enthusiastic crowd and an even more enthusiastic announcer cheering on the fun action. But what about the story that was left dangling in the air? Tragically, *BioForge Plus* would not have done much to remedy that, as writer Jack Herman tells us – it would have merely been a stopgap, building a rickety narrative bridge to a theoretical *BioForge 2*: Lex lands on the Black Raven for repairs, fuel and to look for clues that might lead him to Dr Mastaba. According to Jack, at the end of *BioForge Plus*, Lex would

» [PC] *BioForge Plus*' Gauntlet Mode pits Lex against waves of increasingly stronger opponents.

» [PC] The story of *BioForge Plus* was designed to lead to *BioForge 2* and saw Lex landing on the Black Raven.

BIOFORGED IN ADVERSITY

NURSEBOT

■ This is the very first enemy that Lex encounters when he wakes up. It tries to put you back to sleep, but a solid kick sends it into your cell's energy barrier, opening up the game.

CAYNAN

■ Caynan was originally the former Mondite chief of security, but now he's a failed experiment. Caynan is notable for only having one arm, really likes his fork and is very blue.

MECHBOTS

■ Be careful whenever you encounter Mechbots in *BioForge*. They can (and will) kill Lex with a single deadly shot. They can only be brought down by several direct blaster hits.

CYBERAPTOR

■ This is another one of Dr Mastaba's failed experiments. Can not be killed but must be beaten into unconsciousness on a specific spot to serve an important purpose.

MONDITE GUARDS

■ There's only a few of them left on Daedalus, and each one has a different personality. Fortunately, roundhouse kicks work wonders on them.

» [PC] *BioForge Plus* went from zero to beta in less than ten weeks – it was never released though.

have been left frozen in space – a thread that would have been picked up in *BioForge 2*, which was to be set several hundred years in the future, with the final battle against the hordes of Killer Mustaboid Cyborgs deciding the fate of the galaxy. But it never came to that.

Of all of the famous games by Origin Systems, *BioForge* has always been the odd one out: a technical marvel for its time, but very demanding in terms of hardware and player requirements. It was created with spectacular technology in mind first, and the gameplay second – and that shows, especially when you try it for the first time these days. Even Ken calls it a "technology showcase" on his LinkedIn profile, and in retrospect says, "Creating the innovative technology ate our lunch, and we had little time (or skill, on my part) to refine and improve the experience. I was a lead programmer promoted to run the team, and I just didn't know how to balance the many demands of the project. If I had to do it over again, I would put great gameplay front and centre!"

Give it a second or third chance, though, and you will see that underneath its doggish exterior lies a diamond in the rough – a very special gaming experience that revolutionised the way action adventures could look like (predating the first *Resident Evil* by a year) and delivered a gripping sci-fi tale whose clever narrative still holds up well today. Even if it never got the chance to be properly concluded.

"IF I HAD TO DO IT OVER AGAIN, I WOULD PUT GREAT GAMEPLAY FRONT AND CENTRE!"
KEN DEMAREST

FINDING YOURSELF

WHO ARE YOU THEN, REALLY?

■ "Variable identity outcomes – your choices throughout the game determine your former identity from a list of experimental subjects," this is the first entry in the feature list on the back of some of *BioForge*'s game boxes. The idea behind it is that by doing certain in-game actions you define which one out of a dozen possible personalities (male or female) you used to be before becoming Experimental Unit AP-127. The path to unveiling that secret is quite convoluted though:

1. Did you kill Roland, the guard at the top of the base?
2. Did you kill Dane, another one of Dr Mastaba's victims?
3. Did you help the injured Dr Escher?
4. Did you kill Alien Learner Gen?

These four decisions create choice trees that ultimately lead to one personality. But to learn more about that, you have to find Dr Escher's logbook, scan it for her security access code that is buried deep within it, use that code at the medical computer in the operating room and read all of the entries in the secured database to finally learn who you used to be! Which is then followed by a quite anticlimactic entry in Lex's journal, "Escher's final gift to me was the chance to find out who I really am. Now that I know, I can't say it means all that much. I'm not that person anymore, and I never will be again."

HERE ARE JUST SOME OF THE ENEMIES YOU'LL DEAL WITH IN BIOFORGE AND BIOFORGE PLUS

DROPSHIP

■ Both marine dropships, Roenick and Chelios, named after former NHL players, must be shot down – otherwise they will kill you. Be warned, they take a lot of firepower to destroy.

SPACE MARINES

■ The toughest humanoids in *BioForge* – good thing you only have to fight one of them. They become nearly indestructible hulks in *BioForge Plus*.

DROGG

■ Be extremely careful around this alien creature, as it's easily one of the toughest opponents in the game. Drogg has to be fought several times, so use all your skills to defeat it.

FLOATER

■ Annoying little critters with very painful stingers that do a lot of damage. It's only vulnerable when uncurled, so keep that in mind and you should have no problem besting them.

ACID BEAST

■ This terrifying horror from the acid lake seems indestructible when you first encounter it – but there's always that handy missile from one of the downed marine dropships…

Future Classic

Modern games you'll still be playing in years to come

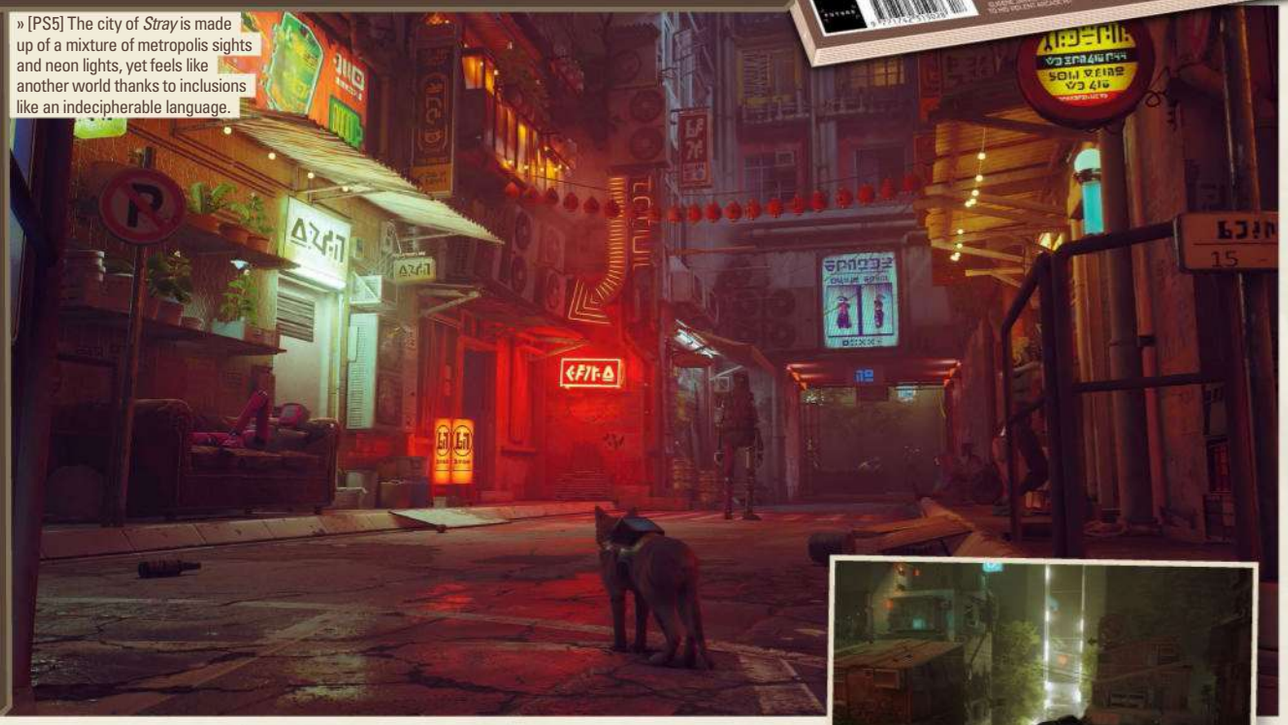
Info

- **System:** PS5, PS4, PC
- **Year:** 2022
- **Publisher:** Annapurna Interactive
- **Developer:** BlueTwelve Studio
- **Key People:** Koola, Viv, Hugo Dunas-Wald, Yann van der Cruyssen, Swann Martin-Raget, Steven Lerner

Go Deeper

» The style and design of *Stray*'s subterranean world was heavily influenced by Kowloon Walled City in the British Hong Kong region of China. It was seen as the perfect cat playground.

» Though unnamed in the game, the ginger cat at the centre of *Stray* was based on the cats of BlueTwelve's two founders, Murtaugh and Riggs.



» [PS5] The city of *Stray* is made up of a mixture of metropolis sights and neon lights, yet feels like another world thanks to inclusions like an indecipherable language.

BlueTwelve Studio achieved darn near purrfection in this inquisitive platformer that proves a realistic world isn't needed to authentically role play as a feline. Whiskers at the ready, it's time to scratch away at the surface of Stray

Words by Aaron Potter

STRAY

THE BACKGROUND

If curiosity really did kill the cat, then there's absolutely no hope left for the inquisitive ginger feline at the heart of BlueTwelve Studio's debut cyberpunk adventure. That a first-time studio could come out swinging with a game as confident and cohesive as this (in a world as equally realised) is still impressive just a year on from its initial release, especially when you consider that *Stray* was made by a team of just 28 people.

Did *Stray* have the benefit of Annapurna Interactive's publishing might and PlayStation's marketing machine behind it? Sure. But despite the uncannily photorealistic visuals and precedent for being an early-ish showcase for what smaller experiences can achieve with the power of PS5, *Stray* maintains the spirit of a prestige indie game. Such attention to detail makes sense when you consider it's the brainchild of two former Ubisoft artists, Koola and Viv, who sought to create a cat-centric single-player adventure with a futuristic twist soon after visiting Kowloon Walled City in China.

Being placed within such a dense, vertical city as this as a person would have been staggering enough. Fairly early on, however, the decision was made to increase the scale by shrinking you down to the size of a small mammal, swapping out human NPCs for robots in the attempt to render the location even more otherworldly. As Koola and Viv posted GIFs and images of this cat-meets-cyberpunk concept to their blog in 2015 it soon caught the eye of Annapurna Interactive. Cut to seven years later, and the finished result has the makings of an instant Future Classic.

THE GAME

What will most likely strike players first as they tuck into *Stray* is just how uncomplex an approach it takes, despite the seeming sophistication of its presentation. True, the lighting and visuals are absolutely stunning in that *Blade Runner* sort of way and the detail found in environments is insane, but for the most part the story and gameplay featured throughout remains straightforward. It's a smart

» [PS5] Water is a regular enemy you'll encounter in *Stray*, forcing you to think about your route to the other side of the level.

» [PS5] Sprinkled throughout *Stray* are various ways to interact with the world. Sleeping, cleaning and meowing don't advance the story, but look appropriately cute.

Things of note

MAKING MEMORIES

There's more to your trusty droid companion, B-12, than you might first suspect. Hunting around the world will see you find more of its memories.

GET THE ITCH

Just like a real cat would, the world of *Stray* is littered with opportunities for your feline to have a good scratch, be it a carpet, curtains, door or wallpaper.

THE CHASE IS ON

The chase segments that appear in *Stray* are few and far between, but do well to alert you of the Zurks' inherent danger by testing your platforming prowess to the fullest.

LIGHT THE WAY

In addition to assisting with translation and zapping the occasional Zurk, B-12 doubles up as a trusty flashlight to help you explore darker areas of *Stray*'s gorgeous world.

ROBOTS ROCK

Although it's set in the near future, *Stray*'s locations and characters are decidedly retro in design. Many of the robots, for instance, have CRTs for faces.

choice, not only because it means that anyone – cat fans and otherwise – will be able to live out their cat fantasies, but because it lets you stay absorbed in the task at hand.

That task is to simply get back to your fellow family of felines. Soon after trekking through an abandoned facility near the surface of the Earth as a pack, one misstep sends your cat spiralling down within the throngs of a sprawling underground city. The only way to reunite with your friends is to obviously go up, but this is easier said than done. On your mission to get home you'll befriend a robot sidekick, aid the city's robot populace, complete errands, and just generally bide your time in the way most proud cats tend to do: scratching carpets, hopping between rooftops and shoving your head into bags and buckets.

Stray isn't only a strict cat simulator, though, as underneath the basic platforming and cute actions you can perform is the semblance of the ultimate question: what does it mean to be human? This is because, throughout most of this five to six-hour adventure, in order to get home you'll be assisting robots via the main quest and side missions. Both of which hint at a previous tragedy the Earth has gone through, causing you to wonder whether the mechanical residents you spend time with are emulating humans or actually demonstrating free will.

You could easily ignore these prescient themes if you so wish. But with cats arguably being the most curious and inquisitive house pet of them all, it's rather hard to – especially as you edge your way closer back to the surface in the later hours of the game. *Stray* does shake up the worry-free exploration every so often in the form of chase sequences, in which you'll have to outrun a race of mutated bacteria known as Zurks. They only show up a handful of times, mostly as a method of ushering you from one hub to the next, and work to test your overall nimbleness within a less-relaxed scenario.

» [PS5] There's no dialogue in the game aside from the bleeps and boops B-12 creates to convey the sentiment of the city's robot inhabitants.

More so than the kooky robot characters, underlying messages or even the densely packed underworld you've just explored, by the time credits roll the thought that *Stray* leaves you with is that cats… they lead a pretty simple life that's fun to role play for a few hours. And rather than overload you with complex mechanics, BlueTwelve Studio chose to strip *Stray* back to basics in a way that mirrors the humble goal of its well-groomed protagonist.

WHY IT'S A FUTURE CLASSIC

While BlueTwelve Studio could have easily created a cat-based adventure set in our own time and in a setting familiar to our own, the fact that it wraps a well thought through location around such simple pet mechanics is exactly what helps *Stray* make a memorable impression. It allows time for players to focus on the dizzyingly attractive sights surrounding them in a way a cat probably would.

There's no better game you could play to understand the mind and playful nature of a cat than *Stray*. It's for this reason that, as true cat obsessives themselves, directors Koola and Viv have poured their own passion and perspective into a true classic.

THE MAKING OF Fantavision

WHEN YOU'RE LOOKING TO DAZZLE A CROWD, PUTTING ON A FIREWORKS DISPLAY IS A GOOD WAY TO DO IT – AND THAT'S EXACTLY HOW SONY CHOSE TO SHOW OFF THE POWER OF THE PS2. KATSUYUKI KANETAKA REVEALS HOW THE CULT CLASSIC PYROTECHNIC PUZZLE GAME WAS MADE

WORDS BY NICK THORPE

DEVELOPER HIGHLIGHTS

APE ESCAPE (PICTURED)
SYSTEM: PLAYSTATION
YEAR: 1999

FLIPNIC
SYSTEM: PLAYSTATION 2
YEAR: 2003

APE ESCAPE: ON THE LOOSE
SYSTEM: PSP
YEAR: 2005

If there's one thing players expect when a new console launches, it's a spectacular first-party game to really show off what the technology can do. In the late-Nineties, Nintendo used *Super Mario 64* as an ample demonstration of the impressive 3D worlds that the N64 could host and Sega highlighted the ever-decreasing gap between home console and arcade graphics with *Virtua Fighter 3tb*. With the PlayStation 2 being perhaps the most anticipated console launch of all time, you'd naturally expect Sony to bring out the big guns to justify the hype. Instead, it chose to lead with a quirky puzzle game based around fireworks.

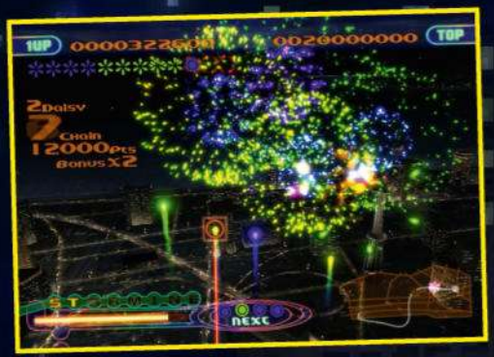
For game director Katsuyuki Kanetaka, *Fantavision* was the realisation of an idea he'd first had as a student in the 16-bit days. "Between the time I was making CG animations with a computer called the Amiga when I was a student and when I started to get involved in game development, I thought that fireworks could be expressed in CG, and if this was possible, I thought that applying it to game screens would surely produce attractive visuals!" The choice of fireworks had nostalgic value too. "I also loved the game screens of videogames from the Seventies to the early Eighties, where only the characters were displayed on a pitch-black background," says Kanetaka. "I thought that a game with fireworks as its motif would allow me to create another game with such a screen."

This was an idea that Kanetaka had held onto for years. Before working at Sony Computer Entertainment, he'd been a game designer at Capcom and the company's strengths in 2D arcade games naturally influenced the way *Fantavision* was conceived. "At first, we were thinking of it as an arcade game, and at that time, we thought that fireworks could only be expressed in 2D," he explains. However, the technology to really do the concept justice just wasn't really there. "Eventually the PlayStation came along, and even with the capabilities of the PlayStation, we could only display one or two fireworks in 3D on the screen," he tells us. "With the PS2, we were finally able to calculate and display that many fireworks. The fact that PS2 hardware was very good at displaying semi-transparency also contributed to the realisation of this technology."

The game design of *Fantavision* is very simple. "At first, we thought of it as an action game, which was inevitable since it was intended to be an arcade game, but as we thought about the rules, it became more like an action puzzle game," explains Kanetaka. "First, I personally made a prototype using a 2D game production tool called Klik & Play and researched what kind of game system would be best." Fireworks – referred to as shells in the game – are launched into the sky, and you use the analogue stick to move a cursor between them. You need to match at least three of the same colour in order to detonate them, and you've only got a certain amount of time before they fizzle out and drain your energy bar, bringing you closer to the game over screen. "At the time, there was no match three puzzle game genre, but I thought it would be just right to have three of them together as an action game," he says.

This would be perhaps too simple, something Kanetaka was aware of. "The daisy chain using wild shells was designed to add depth to the game," he tells us, referring to the mechanic

» [PS2] Here's a less spectacular moment where you're just capturing shells to detonate.



» [PS2] Once you've got your shells captured, it's time for a very flashy detonation.

sion

IN THE KNOW

- **PUBLISHER:** SONY COMPUTER ENTERTAINMENT
- **DEVELOPER:** SONY COMPUTER ENTERTAINMENT
- **RELEASED:** 2000
- **PLATFORM:** PLAYSTATION 2
- **GENRE:** PUZZLE

» [PS2] These cityscapes do bring back very strong memories of the run-up to the PS2's launch.

» [PS2] During a Starmine bonus, you'll get lots of fireworks of the same colour to set off.

EXPLOSIONS 101

A FEW TIPS TO GET YOU STARTED ON FANTAVISION

GOING BIG

When your energy is high and you're in no real danger, it's OK to miss a couple of shells in order to grab a huge chain – you'll likely spawn enough power-ups to cover any energy loss involved in seeking your high score.

STAYING SAFE

Once your energy is low, switch to a more conservative strategy of favouring small chains that ensure every shell is caught. Make sure that you grab every E icon you see as you do, as those are your energy refills.

PRO HOPPING

Power-ups are useful because they can be worked into your chain regardless of the colour you're currently targeting. However, you can't detonate them alone – you need at least one coloured firework in your chain for a big bang.

PUSH IT

When playing against a friend, you'll want to take advantage of the dividing line by pushing it toward your opponent. This limits their movement space and therefore their opportunity to create chains, and gives you extra shells to detonate.

BE SMART

In multiplayer, you'll sometimes want to avoid certain power-ups – particularly the one that swaps the playfield. You don't want to end up accidentally gifting your opponent the Starmine you worked so hard for, after all.

where multicoloured shells allow you to transition to another colour, greatly increasing the number of fireworks you can detonate in one chain. Power-ups periodically appear and can award you bonus points, extra energy and stars that trigger the bonus Starmine section. "The Starmine was a bonus mode when we tried to double or triple the value of the firework launch parameter," he notes, and those huge launch numbers are usually in bursts of a single colour, allowing you to rack up massive chains.

While the design was simple, the development was not. The major leap in power that the PS2 offered enabled the game to exist, but it certainly wasn't the easiest machine for developers to get to grips with, especially while the hardware itself was still in flux. "The conditions under which the processing load on the display was high were the exact opposite of those on the PS1, and MPEG2 video compression technology had not yet been established," Kanetaka recalls, also mentioning the system's low amount of video RAM. Also, contrary to common myth, *Fantavision* never evolved from a tech demo. "There was a technology demo that was announced before the launch of the PlayStation 2, which was a particle demo that looked like fireworks, and I first heard about that demo on the internet," clarifies Kanetaka. "*Fantavision* did not apply the technical demo presented at that time, but rather our team was researching particles from scratch, so development became a race against time."

Those factors naturally meant that things didn't always work out first time – but that was something that Kanetaka and the team took as an opportunity. "The PS2 had very powerful video capabilities, and when bugs appeared on the screen, sometimes they looked like beautiful, if unexpected, images. We immediately thought about the possibility of recording it on video and using that footage in the game.

» [PS2] If you can capture this many shells before you hit the detonator, you're doing pretty well.

» [PS2] During a Starmine bonus, you'll get lots of fireworks of the same colour to set off.

» [PS2] Fireworks normally launch from below, but anything goes when you're in space.

ALTERNATIVE DISPLAYS

OHANABI

1999

■ Or *Pachislot Aruze Kingdom Pocket Ohanabi*, to give its full legal name. This rather tenuous inclusion is based on the real pachislot machine released in 1998, which has a fireworks festival theme. Of the many gambling games on the Neo Geo Pocket Color, we'll say it's definitely one of them.

ROCKET MANIA

2003

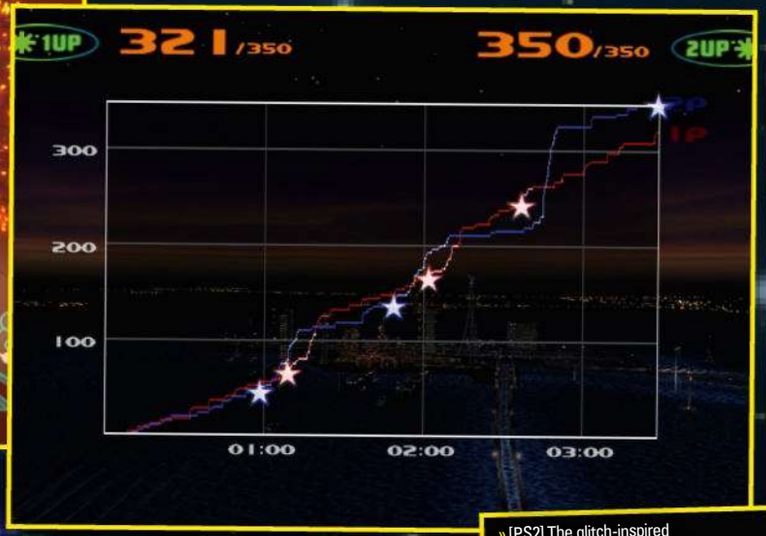
■ This casual PC puzzle game from Belgian developer Nuclide Games may remind you of Taito's arcade game *Tube-It*. Classic Mode has you rotating fuse pieces to connect flames to fireworks, while Arcade Mode tasks you with surviving the falling blocks of fuse pieces.

BOOM BOOM ROCKET

2007

■ This downloadable Xbox 360 game from Bizarre Creations drew plenty of comparisons to *Fantavision* due to its look, but the two games play very differently as *Boom Boom Rocket* is a rhythm action game. Despite the developer's unfortunate demise, modern Xbox consoles support it via backwards compatibility.

» [PS2] Extra effects often ensure that Starmine runs are the most spectacular moments.



» [PS2] After multiplayer, a chart shows you how the battle played out and marks Starmine moments.

» [PS2] The glitch-inspired Starmine title card will delight fans of Jeff Minter's work.

We utilised it for things like psychedelic effects when the Starmine was triggered and in the replay mode," he explains. "After *Fantavision* was released, we were delighted to see the effects added to the Windows Media Player."

» [PS2] Here's that Fifties aesthetic we were talking about – it's unusual, but it works.

Beyond the spectacular pyrotechnics, one of the other memorable aspects of the game's aesthetic is representative of Kanetaka's nostalgic inclinations, featuring footage of a Fifties-style family. "Advertising representations of games from the Seventies, such as *Magnavox Odyssey* and *Atari Video Pinball*, depicted families playing games together. I loved that atmosphere," he tells us. "I also felt that the games of the Seventies and early Eighties had something in common with the music of the Fifties and Sixties, such as 'space-age bachelor-pad' music and Moog music. It had a spacey, exotic mood music vibe. *Fantavision* was created in that era, so that's why I made the video like that. The UI, logo, fonts and music for the Japanese version were also created with this image in mind."

Creating *Fantavision* proved to be a real challenge. "The development period was ten months and the number of people involved was approximately ten," says Kanetaka. If that doesn't sound like much time, it's because it wasn't. "At first there was not much pressure because there were other games in development. However, before I knew it, it was decided that it would be the only [first-party] game to be released on the PlayStation 2 launch date, and I began to feel pressure to develop it in time," says Kanetaka, who also elaborates on *Fantavision*'s small development team. "*Street Fighter Alpha 2*, which I was involved in the development of at Capcom, and *Ape Escape*, which was developed just before *Fantavision*, were made by 50 to 100 people so it felt like an indie game."

But just how did *Fantavision* end up as the only first-party launch game for such an important platform? *Next Generation* magazine's December 2000 interview with Shuhei Yoshida, then vice president of first party development at Sony, is enlightening. Yoshida felt that the teams third parties chose to develop early PlayStation games were "not the top teams" and that games like *NFL GameDay* and *Twisted Metal* had benefitted from "the lack of competition". By contrast, he felt that the first-party support for the PS2 "does not have to ▶

BELIEVE IT OR NOT, FANTAVISION IS FAR FROM THE ONLY FIREWORKS-THEMED GAME

BIG BANG MINI

2009

■ Despite being reviewed positively upon release, this DS shoot-'em-up by Arkedo Studios seems to have fallen into obscurity. Using the touch screen, you flick fireworks upwards to defeat enemies on the top screen, and must avoid the burning embers resulting from your own missed shots. It's well worth a try.

FIREWORKS MANIA

2020

■ Although this PC indie game is primarily designed to allow players to create beautiful displays, most of the people we've seen playing this are just looking for stuff to blow up. In fact, we've even seen a streamer crash their own PC in the process of creating an elaborate disaster.

ENCORE PERFORMANCE

HOW FANTAVISION MADE A SPECTACULAR RETURN

After two decades of dormancy, *Fantavision* has finally returned to our screens. "I had been working as a freelance game designer for the past ten years or so. It was during this time that I became acquainted with Mr Kazunobu Mori, the representative of Cosmo Machia Inc, and Mr Mori asked me if I would like to create a game like *Fantavision*," says Katsuyuki Kanetaka, explaining how *Fantavision 202X* came to be. "The name Cosmo Machia is both the name of the company and the name of a game based on the night sky's 88 constellations developed by Cosmo Machia. Mr Mori thought there was an affinity between the night sky of *Fantavision* and the world of the constellations of *Cosmo Machia*. I was also very interested in how much more advanced *Fantavision* would be if it were made with today's computers, so we decided to work together to develop a new *Fantavision*."

» [PC] The graphics are all new, but the cityscapes of *Fantavision 202X* are instantly familiar.

The resulting game is a brand-new sequel for PS5 and PC that's available now. "The code, graphics and sounds are all made from scratch," Kanetaka says. "Thanks to the increased processing speed of the computer, we were able to create a variety of fireworks that are more similar to actual fireworks, and they are very beautifully rendered. At that time, PS2 *Fantavision* was played on CRT TVs. Now you can play it in full HD or 4K and it even supports VR."

Kanetaka says the interest in VR was due to Sony's new peripheral. "The time when I planned *Fantavision 202X* was just after PlayStation VR 2 was announced. I was very interested in VR and thought it would be great to play *Fantavision* in VR. When I proposed the *Fantavision 202X* project to Sony, they responded very well to VR support, so I decided to support it," he says, clearly proud of this mode. "The feeling of actually flying above the nightscape is the best feeling I have ever had as a developer. The VR mode of *Fantavision 202X* has been adjusted so that you do not get motion sickness, so if you have a chance, please try playing it."

» [PC] Fear not, unusual Fifties-style FMV scenes are present in the new game.

» [PC] Fireworks do generally look more realistic in *Fantavision 202X* than in the original.

» [PC] With modern graphics hardware, the colourful explosions are more spectacular than before.

» [PS2] When you turn on the psychedelic effects, the game becomes almost unrecognisable.

be the same way because there are many great people making games", and rather than rushing games to market, his goal was to, "Make sure we get the same kind of resources for our games, otherwise the games won't compare to what's out there."

***Fantavision* was completed in time for launch, arriving first in Japan on 9 March 2000, where *Famitsu*'s four reviewers gave it a combined score of 31/40.** *Edge* gave an 8/10 score for the Japanese import release, lauding it as "the most impressive game to be powered by Sony's 128-bit architecture to date", in its review. Despite making positive impressions, the team wasn't yet done with the game. "When we released the Japanese version in 2000, it had only a single-player mode," says Kanetaka. "There was some time between the Japanese release and the release of the North American and European versions, so we added a multiplayer mode to the North American and European versions."

It followed on 26 October in North America, where Soichi Terada's original soundtrack was replaced with a new one by Ashif Hakik. *GamePro* gave it a fun factor score of 3.5/5, saying that it, "Offers pretty lights and tricky puzzles, but it might not offer quite enough bang for your buck." GameSpot gave it 6.6/10, noting that

» [PS2] *Futari No Fantavision* didn't just remix the music, but also offered a new look.

» [PS2] In multiplayer mode, a vertical line divides the playfield and restricts your cursor's movement.

the backgrounds "look excellent and are teeming with detail", but the audio consisted of "inoffensive elevator music" and the "novelty wears off fairly quickly" when playing solo. *PSM* awarded it 5/10, saying that it "seems more like a technological demo than anything else", and *Electronic Gaming Monthly* gave it 5.0/10, opining that it "doesn't offer nearly as much as other launch titles for the money".

Fantavision arrived on 24 November in Europe, with another new soundtrack – this time composed by Jim Croft, with French website Pad&Retro reporting that Sony Computer Entertainment Europe perceived the Japanese soundtrack as "too weird" for European players. The game was positively received by the UK press, with *Play* describing it as "a totally original experience" and claiming that it was, "Certainly a game to wheel out when you want to show friends the power of your new console," awarding it 90%. *P2*'s review said that "when a game as unique as this is released we should certainly applaud it", awarding it 8/10, and *Computer & Video Games* also felt it to be "one of the most bizarre and original games around on any platform", giving it 4/5. *The Official PlayStation 2 Magazine* gave it 7/10, pointing out that "the game isn't exactly long" and criticising the inability to save mid-game, but noting that, "Sony's inclusion of a two-player mode [...] negates some of these shortfalls to a certain extent."

***Fantavision* sold reasonably well in Japan, with the chart agency Media Create reporting 26,977 copies sold in the game's launch week and 173,048 by the end of 2000.** Internationally, it didn't fare as well, hitting 15th place in the PS2 launch charts in the USA and 13th in the UK, where it sold roughly one copy for every 20 copies of the number one game *Tekken Tag Tournament*. That wasn't the end of the story for *Fantavision*, though. "The multiplayer mode we added to the North American and European versions was so much fun that we wanted to make it available in Japan as well," Kanetaka recalls. "So we added a CPU battle mode, etc to the multiplayer mode, updated the stages and music, and released the game as *Futari No Fantavision*," a title which roughly translates into English as *Fantavision For Two*. A significantly scaled back Japan-only mobile version was also released in 2003.

Though *Fantavision* didn't sell as well as games like *Timesplitters*, *Ridge Racer V* and *SSX*, it's fair to say that Kanetaka wasn't really taking aim at them with *Fantavision*. "In the days of *Pong* and *Space Invaders*, adults, children, men and women were all passionate about games. Gradually, however, they became something that only people who identified themselves as game fans could play. I felt very sad about that, so I wanted *Fantavision* to be played not only by core retro game enthusiasts like myself and general game fans, but also by women who are not so interested in games," he explains. "Game fans who like battles and violence were not very interested in *Fantavision*, but many people who normally don't play games were interested in playing it."

Looking back, Kanetaka has two particularly fond memories of seeing his ambition realised. "At the time, the Sony-sponsored PlayStation game show was held in Japan, and *Fantavision* also exhibited at the show. I saw almost all of the 100 or so women who had been working as companions at the booths of the various game companies exhibiting at the show gather at the Sony Computer Entertainment booth and begin playing *Fantavision*," he recalls. "Also, when *Space Invaders* and *Pac-Man* were popular, there was a popular manga in Japan called Game Center Arashi in which the main character played a popular game. After *Fantavision* was launched, the main character played it in an offshoot of the manga," he continues. "These two episodes made me very happy." So if you're looking for a way to coax a reticent friend to try out gaming or simply a new puzzle favourite for yourself, it's worth taking a look back at *Fantavision* – decades later, there's still nothing quite like it.

93
M
Nicholas
M
Steve

Fire Heroes

"THE ROOF, THE ROOF, THE ROOF IS ON FIRE"

» PLAYSTATION 2 » 2004 » GARDEN, INC

Buying games without knowing anything about them feels like a very pre-internet activity, yet that's exactly what I did when I picked up *Fire Heroes* in 2013. This wasn't by choice – there was precious little English language information about the game available, but the disaster theme appealed to me so I took a punt. What I discovered was a cel-shaded game in which you play as either firefighter Douglas Brantley, police officer Max Broderick or architect Scott Winkler, trying to rescue people from the burning Clayton Tower. You get five real hours to play through nine chapters, and there are multiple endings depending on how you do.

Frankly, *Fire Heroes* is an ambitious game but not a particularly good one. It's funny on a certain level, as the voice acting makes *Resident Evil* sound Oscar-worthy and Scott is a spectacular jerk to everyone around him. The animations are frequently hilarious, particularly the dramatic dive used to avoid explosions, and the way cardboard boxes slide on carpet like ice hockey pucks. The characters are phenomenally stupid at times – one particular highlight is the moment when Douglas asks Scott, a civilian with no protective equipment, to accompany him to a burning boiler room.

Replaying the game on Twitch this year was painful. Why do characters frequently fail to follow you when you enter a new room, and why does the camera point directly at the door you've just come through once the loading screen ends? Why does it sometimes take six attempts to put down a hose? Why do you only get seven minutes to escape to the helipad, when you enter the final stage with over an hour until the building burns? There's video evidence of how badly all of these problems wound me up, yet I started a new game just three days after finishing it. Turns out I need to be saved too – saved from my own bad decisions.

» We've been wandering around town picking fights this month, but we managed to squeeze a review of Street Fighter 6 in too. We've also got Lego Pac-Man Arcade, D Life, a truly gigantic book and the latest Katamari game for your consideration

» [PS5] It's possible to add virtual commentators to call your fights as they happen, which is a novelty.

Street Fighter 6

FIGHT ANYONE, FIGHT EVERYONE

INFORMATION

- **FORMAT REVIEWED:** PS5
- **ALSO AVAILABLE ON:** PS4, XBOX SERIES X/S, PC
- **RELEASED:** OUT NOW
- **PRICE:** £54.99
- **PUBLISHER:** CAPCOM
- **DEVELOPER:** CAPCOM
- **PLAYERS:** 1-2

If you're reading this magazine, you can probably remember when *Street Fighter II* was so popular that seemingly everyone was playing it. While such a phenomenon naturally can't last forever, it did feel like Capcom became increasingly focussed on the competitive scene over the years – an important scene that sustains the genre, but a relatively small number of the overall player base. That led to a huge misstep with *Street Fighter V*, which launched in an incredibly lean state that left many players cold. With *Street Fighter 6*, Capcom has taken the time to fundamentally reimagine what a fighting game should look like today, and its efforts should give the series a much wider appeal than it has had in a very long time. The biggest addition is something really substantial for single players to do, in the form of the World Tour mode – an action RPG mode that offers plenty of fighting, RPG-style character development, minigames and a story that takes place in *Final Fight*'s Metro City. If you imagine something like a light version of the *Yakuza* games, that's a good point of comparison – you'll get pursued by thugs in the same way, but you can challenge most bystanders too.

The main cast takes a prominent role in World Tour, but in the form of legendary fighters who will teach moves to the character that you create. You're given extensive control over what they look like, and you can choose one fighter's basic moveset while mixing and matching special moves to create your own ideal

» [PS5] If you're low on health between fights, you'll need to eat something.

BRIEF HISTORY

» *Street Fighter 6* is the latest entry in the long-running series, taking place after *Street Fighter III* in the series chronology. It features 12 returning fighters, including all eight of the main *Street Fighter II* cast, plus six newcomers: JP, Marisa, Kimberly, Lily, Manon and Jamie, with AKI, Akuma, Ed and Rashid confirmed as future DLC.

✱PICKS OF THE MONTH

DARRAN

Castle Of Shikigami 2

I'm still enjoying this Switch shmup and I am looking forward to Red Art Games' incoming physical release of it.

NICK

Street Fighter 6

For some reason, running around and beating up box-headed thugs while wearing cat ears just appeals to me.

» [PS5] JP successfully lands a Drive Impact attack on his fellow newcomer Jamie.

» [PS5] Bonus rounds make a welcome return during the Arcade mode, letting you batter a truck.

fighting style. That's important as you'll be engaging in big fights here, with multiple enemies on the screen and more waiting to join the fray. The mode is a brilliant addition overall, with some funny characters and writing.

Underpinning that is a core fighting engine that is as good as ever, which you'll enjoy in Fighting Ground, which is filled with offline and online modes to enjoy, and the online recreational area Battle Hub. This time, the big new addition is the Drive Gauge, which governs your use of specific techniques like parries, enhanced special moves and the Drive Impact, a technique similar to the Focus Attacks of *Street Fighter IV*. Overuse of these techniques will put you into a state of burnout, and you'll need to wait for the gauge to fully recharge. Additionally, each particular super move now uses a specific number of Super Gauges, rather than having variable strength as in previous games.

One thing we're really impressed with is the drive to make *Street Fighter 6* as accessible as possible, with features including strong audio cues to help players determine relative fighter positions. Capcom has also provided two simplified control schemes – a modern control scheme which has light, medium, heavy and special attack buttons, and a very simple dynamic control scheme which can't be used online. Existing fans will naturally want to stick with the classic six-button scheme, but if you've ever found *Street Fighter*'s inputs too difficult to cope with then you might like what's on offer here.

Capcom *really* wants you to try out those modern controls, too. It's a little bit annoying that you're forced to use the modern controls in the initial chapter of the World Tour mode, and that you have to set your control settings in so many different places. We're also baffled by the fact that the game's default graphics settings favour resolution over performance, resulting in fights playing out at 30fps rather than 60fps in World Tour mode. While that choice makes sense in some genres, one-on-one fighting games need to feel as responsive as possible.

Still, those are relatively minor annoyances in the grand scheme of things. *Street Fighter 6* is a remarkably well-rounded package – there are plenty of fighters to get to grips with and more on the way, the online options work as well as you could hope for and the World Tour mode sets a new standard for single-player fighting game experiences. Genre newcomers, lapsed fans, solo gamers and the hardcore competitive crowd alike should all find something to love here – for the first time in a long time, *Street Fighter* feels like it's for everyone. ✱

WHY NOT TRY

▼ SOMETHING OLD
STREET FIGHTER ALPHA 3

▼ SOMETHING NEW
THE KING OF FIGHTERS XV

In a nutshell

Capcom has pulled off the seemingly impossible, broadening the appeal of fighting games while retaining the depth hardcore fans love.

» Score **93%**

» [PS5] Blanka and *Street Fighter II*'s other seven fighters are included in *Street Fighter 6*'s roster.

» [PS5] Familiar faces from the *Street Fighter* and *Final Fight* universes appear in World Tour.

» [PS5] No matter what changes, Ryu remains a reassuring constant of the *Street Fighter* world.

PICK OF THE MONTH

Lego Pac-Man Arcade

» **Buy it for:** £229.99 » **Buy it from:** lego.com/en-gb

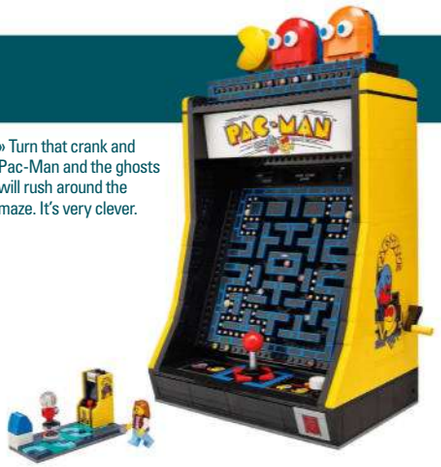
Few Eighties arcade machines are as recognisable as Namco's *Pac-Man*, and Lego's latest build is a stunning mini replica of the classic cab. It's certainly not cheap at nearly £230, but there's no denying that the end result is a fantastic tribute to the iconic arcade machine.

Its closest Lego builds are the Nintendo Entertainment System and Atari 2600, which are similarly priced. This is the biggest of the three machines though, with a total of 2,651 assorted bricks that will take you around 6 hours to assemble depending on your building expertise.

The build itself is spread across 14 stages, which range in skill from simple to intricate. There's a surprising amount of technical pieces built into the build as well, which help to bring the final product to life. You'll start off by creating the topper, which features models of Pac-Man, Blinky and Clyde, which are spread across the first two stages. Rather neatly, a simple spring mechanism is built into the base, allowing Pac-Man to turn on his adversaries with a simple button press.

The remaining 12 stages focus on building the main cabinet as well as a mini *Pac-Man* cab complete with a Minifigure in Eighties garb. While Lego's latest build doesn't feature the many secrets found in either the NES or 2600 builds, it makes up for it with sheer wow factor. The cabinet is not only surprisingly large at over 12-inches in height, but is also technically impressive due to its clever moving screen. It's by far the most difficult part of the build thanks to some fiddly chains, gears and wheels, but it's worth the stress as it looks great in motion, with Pac-Man and the ghosts moving around the maze whenever you turn the cabinet's crank.

While the cost will no doubt put some off – you could buy a licensed miniature cab for less cash – there's no denying that Lego's latest set is a genuinely remarkable-looking showpiece.



» Turn that crank and Pac-Man and the ghosts will rush around the maze. It's very clever.

» It's rather fiddly getting all these gears in place but the results are worth it.

We Love Katamari Reroll + Royal Reverie

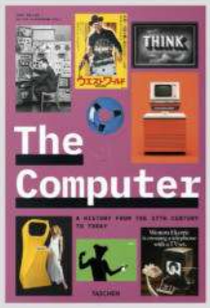
» **System:** Switch (tested), PC, PS4, PS5, Xbox One, Xbox Series S/X » **Buy it for:** £24.99+
» **Buy it from:** Online, retail

Many consider *We Love Katamari* to be one of the best games in the series, so it's rather fitting that a lot of care and attention has gone into this remaster. Developed by Monkeycraft, this is a great reimagining of the PS2 classic with simple quality-of-life improvements, including an enhanced UI, the ability to play levels with the music tracks of your choice, polished HD visuals and a number of exclusive remixed stages (which are a little disappointing). All the game's original content is included, while Eternal Mode, which lets you play with no time limit, has finally been added. The end result is a great upgrade over the PS2 original.
DARRAN JONES

» Score **85%**

The Computer: A History From The 17th Century To Today

» **Buy it for:** £60 » **Buy it from:** taschen.com



It's rare you get a coffee table book that's so large it could almost be used as a table itself. The gargantuan size of Taschen's new book makes a lot more sense once you peruse its many gorgeous high-res images, as the tome's size really allows you to savour each photo.

The size serves a more practical purpose as well, as it lets Taschen add English, German and French entries to most of the book's 472 pages. Jens Müller and Julius Wiedemann have crammed a fascinating amount of information into *The Computer* and while many of the entries are bite-sized they still manage to offer superb insight into the fascinating world of computers. There's no denying it's pricey, but there's also no denying its sheer quality.
DARRAN JONES

D Life

» **System:** PC » **Buy it for:** £5.89
» **Buy it from:** Online

In *D Life* you've discovered a new life form comprised of six colours, and your job is to take photographs of it – simply achieved by holding the left mouse button to expand the circular view, and releasing it to capture the photo. The catch is that every photo involves a mission, such as including a particular number of colours. The Basic Mode is good, but the Time Limit Mode is great – after each photo, you get a choice of two missions with tougher ones typically offering higher score multipliers or greater time bonuses. The unique premise and great risk and reward mechanics make this well worth your time.
NICK THORPE

» Score **90%**

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THE HOMEBREWER'S KIT

<YOUR MONTHLY GUIDE TO EVERYTHING HAPPENING IN THE HOMEBREW SCENE/>

<!--- [GENESIS] BODACIOUS LETS OFF A FIREBALL TO COUNTER XRIS' COMBO. --->

<!--- [GENESIS] PRESSING THE BUTTONS DURING CHARACTER SELECTION CHOOSES DIFFERENT COLOUR COSTUMES. --->

<!--- "THE TOYS-TO-LIFE PHENOMENON INSPIRED ME," SAYS JOHN, WITH PLANS TO SHIP GAME CHARACTER TOYS IN MINI PIZZA BOXES. --->

<INTRO> I WAS PLEASANTLY SURPRISED TO DISCOVER THAT AT THE 5TH ANNUAL ATARI HOMEBREW AWARDS – BIT.LY/5TH-ATARI-HOMEBREW-AWARDS – A GAME I CREATED MUSIC FOR, 8-BIT SLICKS, HAD WON THE BEST ATARI LYNX HOMEBREW CATEGORY. AWARDS AND PRIZES ARE NOT THE ONLY INSPIRATION TO CREATE GAMES, AS WE FIND IN OUR MAIN INTERVIEW WITH I ♥ PIZZA. YOU COULD BE INSPIRED BY OTHER GAMES OR A TECHNICAL FEATURE OF YOUR MACHINE. READ ON TO FIND OUT MORE. </INTRO>

<!--- ALIA AND JOHN LOVE PIXELS AND PIZZA. FOLLOW THEM AT @IHEARTPIZZALLC ON TWITTER, OR FACEBOOK.COM/IHEARTPIZZALLC --->

<MAIN HEADER>

PIXELS & PIZZA

<INTRO> JOHN SPRINGER'S I ♥ PIZZA IS DEVELOPING A PIZZA PARLOUR AND A BRILLIANT NEW GENESIS FIGHTER </INTRO>

<BODY> **"When I was a kid, I imagined what my hometown of Fort Wayne, Indiana, would look like as a videogame," John Springer tells us.** Surviving cancer gave John the incentive to pursue that dream. With help he started developing beat-'em-up *Summit City Showdown* in 2011, finishing it in 2018; and sequels are now in development. "I'm just a pizza guy with a dream. Our business makes pizza and Genesis games, but we're about bringing people together, and creating happy memories." John and his wife Alia will serve pizzas in a restaurant filled with retro games. "It's taken 15 years to figure out how to accomplish that," says John. "We're going to extraordinary lengths to make our concept a fun, unique, and memorable experience. We even have special 16-bit surprises planned for anyone who travels from out of town to visit our cosy little pizza place!"

I ♥ Pizza is planning to publish several obscure games it has acquired (see Top Toppings) as well as its self-developed titles. "I discovered an obscure Genesis puzzle game called *Magic Bubble* developed by C&E," explains John. "In 2009, I emailed Brandon Cobb of Super Fighter Team about purchasing the rights; nine years later, we were honoured to acquire them with Brandon's blessing. We've purchased the rights to several unlicensed Genesis games from Piko Interactive. Many of these titles were developed in Taiwan, with few resources and the threat of piracy looming. Some were released by Realtec in North America and Europe towards the end of Genesis' retail run. Others have yet to be widely released."

I ♥ Pizza is also looking for more games to publish. "I can't tell you what an honour it is to be involved with the Genesis homebrew community," John says. "We'll never forget that, and we hope that our work brings joy to others." The fighting game *Go For It!* is John's focus right now though. "I asked myself,

TOP TOPPINGS

MAGIC BUBBLE

<"We've made some changes for the forthcoming release. If there's one game I hope retro gamers will discover and enjoy, it's *Magic Bubble*." />

SUMMIT CITY SHOWDOWN

<"Our first project – and we nailed the gameplay. We'll put it up against any beat-'em-up on the system in that regard!" />

NEW GAMES NEEDED

Our new email address is waiting for all your homebrew news, previews and more: **retrogamer@futurenet.com**

<!--- [GENESIS] GOOFY GAME-O-RAMA IS A COLLECTION OF MINIGAMES DESIGNED TO BE PLAYED AT THE PIZZA PARLOUR. --->

<!--- [GENESIS] PUZZLE GAME SMART MOUSE SEES YOU MOVING BLOCKS TO CRUSH ENEMIES ACROSS 100 LEVELS. --->

<!--- [GENESIS] ADVENTUROUS BOY LOOKS EXTREMELY CUTE, IN THE STYLE OF SEGA'S FANTASY ZONE. --->

<!--- THE COMPANY IS PREPARING DIGITAL AND PHYSICAL RELEASES OF ITS GAMES, WITH THIS BOX ART FOR MAGIC BUBBLE A WORK IN PROGRESS. --->

"What makes a great fighting game? I'll never forget the summer of 1992 when my neighbour Ryan invited me over to play *Street Fighter II* on SNES for the first time. We want to capture that over-the-top arcade excitement, creating vibrant, diverse, memorable characters with rich personalities and backstories."

Each character has five to six special attacks and a variety of standard attacks, with a choice of costume. "I decided to simplify the controls," John explains. "Special moves and combos require the press of a single button." The game supports both six-button and three-button controllers.

Go For It! will also feature a special guest star: a well-known female pro wrestler, to be revealed before launch. "She's done motion capture for multiple WWE2K games, but she's never appeared in a game herself – until now. We're hoping to invite her for a special meet and greet launch party. There'll be pizza!" </BODY>

<INTRO> JOHN ON HIS FAVOURITE PROJECTS SO FAR </INTRO>

WALLOP THE WALLABY

"A classic platformer starring a prize-fighting wallaby. We thought it'd be great to have a mascot-driven game – we're thrilled with how it came out." />

BUBBLEPUNK

"Built for speedrunning, with a sci-fi aesthetic and a unique twist. This came out of a game jam session, completed in about six weeks." />

MAGIC GIRL

"We love this cute-'em-up originally released by Super Fighter Team – we've made improvements in preparation for its definitive release." />

NEWS BYTES

<INTRO> ALL THE LATEST NEWS, HANDILY ARRANGED BY FORMAT </INTRO>

Amiga AGA: Mutation Software launched *Cyberpunks 2*, 30 years after the original, for the Amiga 1200 and CD32. It's available from bit.ly/cyberpunks2/>

Amstrad CPC: *Sly Spy Allegro* adds music to Ocean's conversion of the Data East coin-op. Download it from moodler.pl/SlySpy.zip/>

Apple II: Renowned RPG *Nox Archaist* has had its latest expansion released. *Lord Of Storms* can be summoned by visiting nox-archaist.myshopify.com/>

Atari 2600: The prototype of 1979's lost game *Sonar* has been recovered. Head on over to bit.ly/sonar-2600 and give it a try/>

Atari XL: Homesoft's *Diskette 473* includes recent releases such as the reworked *International Karate RX/RXC*. It's availalbe at bit.ly/disk473-atarixl/>

BBC Micro: Recent releases including *Pitfall!, Battlezone* and the brilliant *BeebChase* (based on *Deathchase*) can be played online at bbcmicro.co.uk Also, check out *Soko-Ban* for BBC and Electron by 0xC0de, which can be found at bit.ly/sokoban-bbc/>

C64: Protovision's latest digital release is *Cursed Tomb*, with a cartridge version available to pre-order now at protovision.itch.io/cursed-tomb/>

Intellivision: New conversions of Atari 2600 titles *Yar's Revenge* and *Caverns Of Mars* are now on sale at intellivisioncollector.com/>

MSX: GOTO40 marks the 40th anniversary of the MSX's launch, at the H20 Esports Campus in Amsterdam on 9 December 2023 – with special guests, exhibits, game launches and sellers. Follow @GOTO40 on Twitter or visit bit.ly/goto40-msx for more info/>

Various: Under4MHz released puzzle game *Vexed* on 15 formats, including Spectrum Next and Game Boy. It's at under4mhz.itch.io/vexed/>

ZX Spectrum: For 128K machines, *Speccy Soccer Community Edition* (top of page) offers fouls, injuries, cards, replays and multiple teams from different leagues. Choose your price at get it from bit.ly/speccysoccer/>

CHAMPION CODER

RÉMI VEILLEUX

<INTRO> RÉMI IS DEVELOPING A GAME IN THE UNDER-USED HAM (HOLD AND MODIFY) GRAPHIC MODE </INTRO>

<INFO FROM: FRANCE WEBSITE: REMANTIC.COM (WORK IN PROGRESS) FORMAT: AMIGA PREVIOUSLY WORKED ON: SYBERIA & SYBERIA II, GOLDENEYE: ROGUE AGENT, DEAD BY DAYLIGHT WORKING ON: HAMULET />

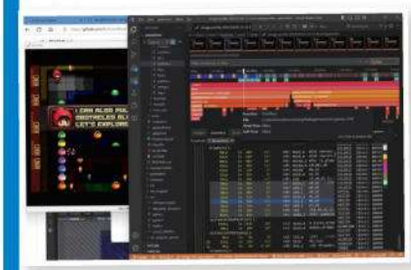
WHAT INSPIRED YOUR NEW GAME, RÉMI?

<I drew inspiration from *Shadow Of The Beast* which boasted, "You will be dazzled by the 128 colours appearing simultaneously on-screen." How about 256 colours just for the sprites and over 2,000 colours for the background? For the gameplay, I looked to classic games like *Lode Runner* and added my own twist to create a light-hearted 2D puzzle-solving/dungeon-exploring game. I was also inspired by the charming retro look of *Crypt Of The Necrodancer.* />

<!--- RÉMI VEILLEUX WITH HIS AMIGA 600. --->

WHAT ABOUT DEVELOPMENT TOOLS?

<I am developing with Visual Studio Code, a cross-compiler, WinUAE, a game engine called ACE (bit.ly/ace-amiga-engine) and an extraordinary toolchain by demoscene wizard Bartman/Abyss (bit.ly/bartman-debug) to assist with debugging and analysing performance. This is an absolute must-have for modern Amiga coding. />



<!--- DEBUGGING THE GAME IN VISUAL STUDIO CODE. --->

<!--- [AMIGA] THIS SCREENSHOT IS DISPLAYING 1094 COLOURS AT THE SAME TIME. --->

HOW DIFFICULT IS USING HAM MODE?

<To me, it is one of the most fascinating yet seldom-used aspects of the Amiga. HAM requires six bitplanes, so incurs a performance penalty – and more bitplanes mean more memory. The screen and graphics require 50% more memory than a 16-colour game. To program in HAM, you must think of it as a kind of 'true colour' display mode, instead of a palette display. Anything usually trivial like doing a palette colour fading requires a completely new approach: the full-screen fade on starting *Hamulet* is recalculating and updating the whole screen, pixel by pixel. Another challenge: horizontal colour 'fringes' appear whenever a pixel is modified, because all neighbouring pixels to the right are potentially modified too. In *Hamulet*, all the background tiles and their lighting/shadowing are drawn in HAM, while all animated or interactive objects are sprites. />

AND AFTER HAMULET, WHAT NEXT?

<I am not setting out a precise finish date yet, but my hope would be to be done by Christmas 2023. I have ideas for either a horizontal or vertical scrolling shoot-'em-up in HAM mode. I also thought a visual novel would work well. />

DATA BURST

2021: MOON ESCAPE

<INFO FORMAT: GAME BOY CREDITS: MIKE YAMATO FOR INCUBOS GAMES PRICE: $8.99 DIGITAL / $59.99 PHYSICAL (PLUS $2.00 FOR PLASTIC CARTRIDGE CASE) WEB: DEMO BIT.LY/MOONESCAPE-DEMO / ORDERS BIT.LY/MOONESCAPE-ORDERS />

<BODY> **Tars Nunian of the Marked Brotherhood has stolen the enemy Kisur war plans and is taking them to the Council on Astra Nova to stop a planned invasion.** But his ship, along with the intelligent computer Thuvia, is diverted by a strange energy reading and crashes on a small moon. And that's where Tars' adventure begins. After a brilliant intro sequence, you'll find yourself on a desolate moon that's filled with enemies Tars can blast with his trusty EMP blaster. He can also upgrade his blaster and suit by using alien Techno Units. Thuvia suggests Tars searches nearby ruins to try and find the Engine Starter Device needed to repair the ship, communicating with Tars through his wrist computer (which also shows a useful map and mission status). Running out of energy teleports Tars back to his ship – where he can save progress – or to the start room of the current interior level.

2021: Moon Escape is a classic overhead RPG with a huge moon to explore. The interior sequences (representing the caves and ruins Tars encounters) are filled with puzzles and switches, while activating strange alien devices with the Expansion Card allows Tars to hop over barriers and jump cliffs. This is a great Game Boy title with gorgeous graphics and atmospheric music that will entertain you for several enjoyable hours. </BODY>

SCORE: 90%

<!--- [GAME BOY] THE VISUALS ARE SUPERB WITH SOME NICELY DETAILED SPRITES. --->

<!--- [GAME BOY] THUVIA IS ALWAYS ON HAND TO OFFER ADVICE, EVEN IF IT'S OBVIOUS. --->

NEW GAMES NEEDED

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<!--- [PICO-8] WE'VE NOT HAD THIS MUCH FUN BUILDING BRIDGES SINCE LEMMINGS. --->

<!--- [PICO-8] THERE'S A LOT OF CHARM PACKED INTO HELLGINEERS TINY PIXELS. --->

HELLGINEERS

<INFO FORMAT: PICO-8 (WINDOWS, LINUX, MAC & RASPBERRY PI EXECUTABLES) CREDITS: JOHAN PEITZ (DESIGN, CODE), VAV (SOUND & MUSIC), SOMEPX (FONT) PRICE: $3.95 (DIGITAL) WEB: BIT.LY/HELLGINEERS (GAME) / BIT.LY/HELLGINEERS-DEVELOPMENT (DEVELOPMENT RETROSPECTIVE IN PICO-VIEW WEBZINE) />

<BODY> **Demons on bicycles are trying to escape Hell, but there are fiery canyons in their way.** You help by building bridges across the gaps, gradually earning new materials and skills as challenges are completed. In Blueprint Mode, you can click and drag pieces into place. Then in Play Mode, the demons try to cross – without falling into the lava, being hit by fire demons (which burn bridges) and by exploding imps. Skillful players will build with fewer pieces than the construction limit and grab bonus skulls on the way. This ingenious game has similarities to classic indie titles *World Of Goo* and *Bridge Constructor*, with cute graphics and an easy-to-use interface. It's a hair-tearing, brain-teasing puzzle game with 40 challenges to beat. </BODY>

SCORE: 87%

<!--- [C64] CONTROL L-3573-R AS IT ATTEMPTS TO STOP A ROGUE SATELLITE IN LESTER. --->

<!--- [C64] WE'RE A BIG FAN OF LESTER'S VISUALS. IT CAN LOOK QUITE CHARMING IN PLACES. --->

LESTER

FORMAT: C64 CREDITS: KNIFEGRINDER PRICE: NAME YOUR OWN PRICE (DIGITAL DOWNLOAD) WEB: BIT.LY/LESTER-C64

<BODY> **Inspired by the MSX title *Ghost*, Android L-3573-R must stop a rogue satellite by shutting down its main computer.** Extra equipment is hidden in barrels; Infrared is needed for dark rooms, and you'll need the Radiation Shield to cross toxic waste. Coins from dead enemies are spent at terminals to restore health or to upgrade Lester's laser, while switches and key cards open new areas. Dying allows you to continue from the start, but you'll keep any earned equipment. A bold graphic style and multiple tunes add to the excellent atmosphere in this superb Metroidvania-style game. </BODY>

SCORE: 88%

PROCESSING

<INTRO> RUNNING AND GUNNING THROUGH MONTE BOYD'S LATEST C64 PROJECT – INFEZTATION </INTRO>

<BODY> **Action fans should enjoy Monte Boyd's *Infeztation* "It is a side-scrolling run-and-gun shooter with hi-res graphics and lots of action.** There's a little bit of finding switches to open doors and collecting security keys," says Monte, stressing that the emphasis is on shooting. "*Turrican II* is the most obvious inspiration, but lots of other run-and-gun platformers as well – *Cyberdyne Warrior*, *Runn 'N' Gunn* and *Ruff 'N' Tumble* on the Amiga. But it's also taking influence from non-platformers like *Alien Breed*," Monte says. He is also planning a digital release and possibly a cartridge version. "This will be my first scrolling game which is lots of fun. I'm using a style of hi-res artwork that I haven't seen on the C64 before. I'm also throwing in lighting effects on the player's muzzle flash when the gun is fired." So when is Infeztation planned to release? "Sometime this year. I'm only around 30% of the way through. I'm hoping to provide quite a few levels, it will take some time to create them." We look forward to it. </BODY>

<!--- [C64] – INFEZTATION IS LOOKING LIKE A LOT OF FUN AND PROMISES LOTS OF INTENSE, RUN-AND-GUN ACTION. --->

HOT TOPIC

RETROBATES MULL OVER THE SCENE'S MOST INTRIGUING ISSUES

» [Arcade] The original *Mortal Kombat* caused quite a stir on release due to its immense levels of graphic violence.

GORE GALORE!

The team revisit the Mortal Kombat series

DARRAN JONES

NICK THORPE

TIM EMPEY

With a new trailer dropping for *Mortal Kombat 1* just ahead of *Street Fighter 6*'s launch, it felt like a good opportunity to revisit the gory series. Will the discussion between Nick, Darran and Tim end in Friendship or with a Fatality?

DARRAN

So what did everyone think of that new *Mortal Kombat 1* trailer and was it a cynical attempt to take interest away from Capcom's *Street Fighter 6*?

NICK

I liked the trailer, but I'm a little bit wary of this being yet another reboot – the last three games were really pretty good. As far as being an attempt to take interest from *Street Fighter 6*, if it was, it hasn't worked. Everyone's talking about *Street Fighter*.

TIM

I was like, "Oh another reboot, meh." And then it got so incredibly violent that I was wincing at bits of it. Not sure how much it'd detract from *Street Fighter 6* though, there's way more interest in *Street Fighter* right now.

DARRAN

I thought it got progressively gorier as the trailer continued.

> "I guess you can't have Superman getting his head ripped off"
> NICK THORPE

NICK

I actually had a lot of fun with the original *Mortal Kombat* when I was a kid – the special moves were easier for me to perform than the ones in *Street Fighter*, and on the Master System I didn't really have many better options. That said, when the second game came out, I never looked back.

TIM

It was an interesting departure from sprites. The way you activated special moves was weird for me though. However, doing back, back, forward for Raiden's Torpedo was hilariously easy. But yeah the second *Mortal Kombat* was better, and I really enjoyed *3* with its cool button combos.

DARRAN

I loved the life-like look of the first game, but the stilted animation and the blocking really let it down for me. I agree that *Mortal Kombat II* is probably the best of the early games and it had some great home ports too. I must admit I kind of lost interest with the third game. It just felt that too many similar characters were in it.

NICK

Yeah, by the time *Ultimate Mortal Kombat 3* came around you had the rainbow ninja squad of Scorpion, Reptile, Rain, Ermac and the classic versions of Sub-Zero and Smoke. It was a bit much.

TIM

Kabal was introduced in the third one and he was my main character. I could do all sorts of huge combos with him. I was on the dole at the time, so I spent a lot of time on it.

DARRAN

Did anyone play any of the early 3D games? I remember playing *Mortal Kombat 4* on the N64 and not liking it too much and the less said about *Mortal Kombat Mythologies: Sub-Zero* the better.

NICK

Mortal Kombat Gold on

» [Arcade] *Mortal Kombat II* is easily the best of the early games and was blessed with a number of great home ports too.

» [Arcade] Yes it's ridiculously violent, but *Mortal Kombat II* also let you perform a cute Friendship move on defeated opponents.

the Dreamcast was a disappointment, but I thought that Midway had killed the series off for good when the Jax-centric spin-off *Mortal Kombat: Special Forces* came out. Everyone remembers *Mythologies* being crap, but that one was somehow even worse.

DARRAN

To be fair, I did enjoy *Mortal Kombat: Shaolin Monks* when we played that, Nick.

TIM

By that point I'd dropped off *Mortal Kombat* as a whole. It seemed like they were just pumping out these spin-offs and bad 3D games. And I was getting into *Street Fighter III* around that time too.

DARRAN

Everyone was getting into *Street Fighter III*. What about *Armageddon* and *Deadly Alliance*. Anyone enjoy those?

TIM

Nope.

NICK

Those PS2-era games were an improvement on what had gone before, but I never got on with the various fighting styles and weapons. I don't think the series really started to get back to being a top-level fighter until a bit later on.

DARRAN

Yeah, it feels like *Mortal Kombat Vs DC Universe* was a turning point but even that felt odd as there were no Fatalities in it if I correctly recall.

NICK

That was weird, but I guess you can't have Superman getting his head ripped off.

TIM

I was there in Las Vegas when it was announced at a big Midway showcase. The trailer played and afterwards there was an atmosphere of confusion as everyone had the same thought, "Batman doesn't kill anyone. This'll never work."

» [PS3] It was mechanically sound, but not letting DC's superheroes perform Fatalities felt very off-brand for the series.

DARRAN

Well the studio certainly changed its tune with the *Injustice* games. I recently picked up *Mortal Kombat XL* and have really enjoyed playing as the Alien and Predator. The time-travel story from *Mortal Kombat 11* is really good as well. Anyone else like the newer games?

NICK

Honestly, I think the recent games are the best the series has ever been. I'm not so keen on all the microtransactions in *Mortal Kombat 11*, but then that's just a more transparent cash grab than the relentless AI cheating in *Mortal Kombat II*.

TIM

I tried a bit of *MK 11*, but just got too tired and annoyed at trying to learn new combos. That and the d-pad on the Xbox controller wouldn't recognise my jump forward input and Scorpion looked stupid jumping straight up all the time. Maybe *Mortal Kombat 11*... finished me?

» [Arcade] *Mortal Kombat: Armageddon* allowed you to create your own Fatalities.

» [PS2] As *Mortal Kombat* spin-offs go, *Shaolin Monks* was surprisingly decent fun.

» [PS4] Later games would start introducing classic movie villains. Freddy Krueger, the Terminator and the Alien are just a few of the murderous icons to appear.

A TRULY KILLER CAST

Readers share their favourite Mortal Kombat characters

Chris
It has to be Scorpion. He was the first character I used in the arcade and his Fatality was one of the easiest to pull off. Plus, "Get over here!" has to be one of the most iconic sayings in videogame history.

ACO
It's a cross between Raiden and Kitana. Their gameplay styles appeal to me most. Plus, one is a god, the other is a badass princess.

Dude Gameison News
Ryu. Because he is a true martial artist! [There's always one – Ed]

PalicoPadge
Sub-Zero ever since the original after witnessing for the first time what I consider to be the most visceral of all the Fatalities from the first game. He could rip off your head and pull out your spine in one swift motion!

Third Dwarf
Reptile. The mystery of him in the first game, then finally being able to play as him in the second. Love the fact he was the first documented secret character in videogame history too.

Jermaine RPG
I would go with Noob Saibot. He looks like the boss of the ninjas and his moveset is slick and sick.

Jason
Kano. If only because his was the only Fatality I could pull off on a one-button joystick on the Amiga. It's stuck with me for the last 30 years.

Julie Smith
Johnny Cage. I can't play the game with anyone else. He's just my character.

Llama King
Raiden. When *Mortal Kombat* first came out I was really into action movies and *Big Trouble In Little China* is one of my favourites.

LiToneUP
He wasn't playable but was an iconic character nonetheless, it has to be Dan 'Toasty' Forden.

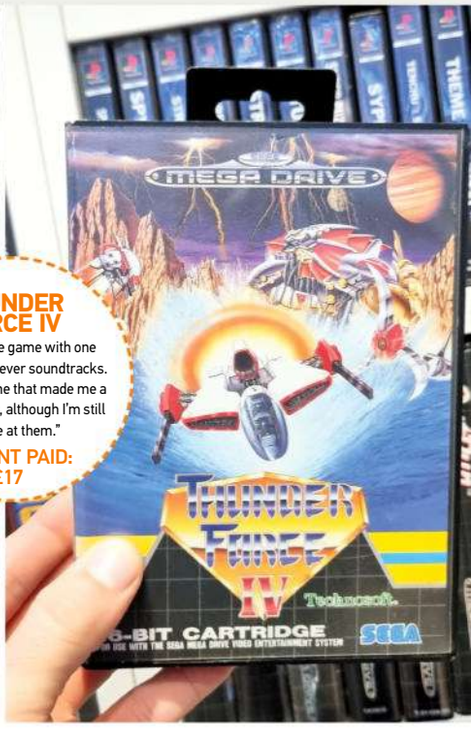
Fivepast
Scorpion, if only because he is pretty much the face of *Mortal Kombat*.

David Sheppard
Baraka from *Mortal Kombat II* as it was the first *Mortal Kombat* game I played and I performed my first Fatality with him – purely by accident. Seeing him impale and lift Liu Kang up was an eye opener.

COLLECTOR'S CORNER

READERS TAKE US THROUGH **THE RETRO KEYHOLE**

THE LEGEND OF ZELDA: A LINK TO THE PAST
"My favourite game of all time! The music, the colour palette, the gameplay – absolute perfection. I got my copy via a Facebook advert complete with map, secrets book etc."
AMOUNT PAID: £90
Nintendo
THE LEGEND OF ZELDA
A LINK TO THE PAST
SUPER NINTENDO
PAL VERSION


THUNDER FORCE IV
"An awesome game with one of the greatest ever soundtracks. This is the game that made me a fan of shmups, although I'm still terrible at them."
AMOUNT PAID: £17
MEGA DRIVE
THUNDER FORCE IV
Technosoft
16-BIT CARTRIDGE
SEGA

BIO

NAME:
Callum Stannard

LOCATION:
Derby, England

ESTIMATED VALUE OF COLLECTION:
Approximately £30,000

FAVOURITE SYSTEM:
SNES

FAVOURITE GAME:
The Legend Of Zelda: A Link To The Past

YOUTUBE:
@RetroGhetto

GHETTO'S BLAST FROM THE PAST

Our latest collector builds his collection at the lowest cost

When Callum Stannard bought his first house, he quickly identified the perfect space for a games room. But as his collection has grown, so has his ambition. "My current games room took me two years to plan and six months to build as it was previously a dilapidated garage that we completely renovated and extended," he says. "It's genuinely a dream come true to have this dedicated space and I'm very thankful that I was able to document the journey of building the room on my channel."

The channel in question is the YouTube favourite Retro Ghetto which has close to 8,000 subscribers and about 750,000 views. Viewers have been treated to in-depth looks at Callum's collection which are all neatly displayed on shelves that run along bright white walls in a room peppered with large promotional gaming cutouts, retro toys and large-screen TVs.

Seeing such variety is a reflection of Callum's personality. "I've been collecting videogames for approximately seven years although I've always been a collector – stickers, pogs, CDs, you name it, at some point I've collected it," he says. That said, he's been a gamer since the Nineties. "The Super Nintendo is where it all started for me. Although I have vague memories of playing on the C64 and NES, I have the fondest memories of the SNES. It's the system that made me a lifelong gamer."

Although he has lots of Xbox and Mega Drive games, one of Callum's aims is to amass a full PAL SNES collection. "If I'm going to attempt a full set of anything, it may as well be for my favourite system of all time, right?" he asks, admitting that he has a long way to go. In the meantime, he's mightily proud of his full set of Wii U games. "I don't particularly have a huge passion for the console; it was something I wanted to achieve as a collector's goal and, given the relatively small number of games released for the system, it felt realistic."

Callum also considers future values. "The Wii U's library was soaring in price so it was financially a sound investment too," he reflects. Yet he's keen not to pay over the odds for items. Part of the fun of collecting, he says, lies in finding a bargain. "Viewers of my channel will attest that I am cheap," he explains. "I keep spending to a minimum by sourcing games, DVDs, Blu-rays and so on and utilising the CEX voucher scheme where I can basically trade in those goods and use the vouchers to purchase games I want for my collection. For me, 'wheeling and dealing' keeps the hobby affordable and fun."

He says it's still possible to find those bargains although it has become harder over the years. "You may never walk into a charity shop and find piles of boxed SNES games but there are games and other media still available that can be sold or traded," he says. But the key thing is to collect what you have a passion for, he adds. "Limit yourself to certain consoles and look at what is affordable, not necessarily fashionable – the Xbox 360 is a great example of a console with a fantastic library of games still available at low prices," he says. "That will not always be the case."

Got an impressive collection of your own? Contact us at:
RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

DEF JAM: FIGHT FOR NY
"I am a huge fan of hip-hop and one-on-one fighters so you can imagine how hyped I was for this one, one of very few games that I have bought on the day of release."
AMOUNT PAID: £29.99

SUPER MARIO ALL-STARS SNES PACK
"Opening this console on Christmas day 1994 is where it all began for me! To this day it still baffles me that four of the greatest games ever made can fit on one cartridge."
AMOUNT PAID: GIFT

JEWEL IN THE CROWN

SUPER HAGANE

■ "*Hagane* is a very rare and amazing action platformer where you play as a cyborg ninja! I pieced all three components of this one (cart, manual and box) separately."

PAID: £170

BARGAIN HUNT

Your guide to the rising world of retro prices

THE COVER STAR

NES

If you fancy owning Nintendo's 8-bit console you'll find them unboxed from **£75** climbing to as much as **£130.** As is often the case, you'll be paying a lot more money for a boxed version, or one that comes with additional games.

WEREWOLVES OF LONDON

Although a French seller recently asked for **£200** for this game on disk for the CPC, you can pick up a dual Spectrum/CPC version on tape for about **£8.**

CHAOS

Julian Gollop's strategy gem can be had for as little as **£10** if you're happy to grab the covertape from issue 57 of *Your Sinclair.* Otherwise be prepared to pay between **£40** and **£60** for an official copy.

BIOFORGE

This 1995 action adventure game really is a bargain with the game tending to sell for around a fiver. If you'd like the game in its original big box format, you're still only paying **£20** or so for it.

FIRE HEROES

Hose down that wallet because you'll need to burn through a small amount of cash if you want to pick up this PS2 game from 2004. Expect to pay around **£50** for a complete copy.

WARIOWARE: TOUCHED!

Fancy trying your hand at this compilation of frantic minigames for the Nintendo DS? A European version can be had for a fiver while the NTSC one can cost about five times as much.

FANTAVISION

Wanta Fanta? You can have it for as little as a shiny pound coin. That said, most copies tend to sell for about **£3** to **£5** even for the ones sold in Japan. That should have you popping with excitement.

THE RAIDEN PROJECT

This PAL port of *Raiden* and *Raiden II* is going to raid your piggy bank to the tune of **£34** – unless you go for the US Playstation long-case version which can sell for around **£80.**

HOW MUCH?!

POKÉMON GAMES

A collection of 13 *Pokémon* games including two copies of *Pokémon Blue* and two copies of *Pokémon LeafGreen* recently sold for **£1,148.** Amazingly, no games, trays, inserts or even manuals were included, it was just the cardboard boxes!

Prices correct at time of print

MY RETRO LIFE

PERSONAL STORIES ABOUT OUR **SHARED PASSION**

REVISITING BLIP MAGAZINE

Paul Drury and the magnificent seven (issues)

Like many gamers who grew up in the Eighties, videogame magazines were as important to me as the games themselves. That monthly thrill of spotting the latest issue of *Zzap!64* and *CVG* on the newsagent's shelf and leafing through the pages has stayed with me. Holding an original copy of a favourite mag is a nostalgia rush but collecting them demands considerable physical space and so I've never had a complete collection of any publication.*

That's until I stumbled across *Blip*. I was actually searching for the old Tomy handheld tennis game of the same name but Ebay flashed up an image of an A5 sized mag with Albert from *Little House On The Prairie* playing *Tron* on the cover. I was understandably intrigued. So, I ordered it at $5 plus postage from the USA and was soon reading how Albert (actor Matthew Labyorteaux) was also a dab hand at *Centipede* and had come tenth in the national championships. Who knew?

Along with chronicling the gaming predilections of various Hollywood stars, issue 1 of *Blip*, dated February 1983, also featured the familiar moustached and grinning face of Walter Day alongside tips and high scores for popular coin-op titles of the day. Then there were arcade-related dad jokes, 'hilarious' concepts for new games (sadly, *Boob Tube* is not as much fun as it sounds), a competition for readers to design a videogame with a $50 prize and a comic strip featuring Donkey Kong and Mario.

I immediately searched for further issues and discovered only six more were released, with the final one appearing in August of 1983. It was produced by Marvel, explaining the comic book look and feel, and Stan Lee was named as the publisher. He seemed to have taken his involvement seriously as issue 2 has him inviting a bunch of teens round to his house, not to admire his kitsch interior décor, but to play the latest *Spider-Man* game against Spidey himself.

Over the rest of 2010, I managed to buy the remaining half-dozen issues of *Blip*. Some of the conversations with game designers are absolute gold – *Centipede* programmer Dona Bailey gives some great insights into creating that classic shooter in issue 4, just a few years after it debuted in arcades. Many features focus on predicting where the medium is going next and reading what 1983 writers thought the future might look like is always entertaining, whether they get it almost right or totally wrong.

***Blip* does not hide its Marvel Comic roots, either.** There are plenty of tie-ins with its established IP, including a lengthy *Hulk* strip in issue 7, in which the green Goliath gets stressed out by a Rubik's Cube before chilling with a VCS, and there are many full-page videogame-themed cartoon gags. Some are even funny.

> "Seeing all seven issues of Blip on my shelf makes me smile"
> **PAUL DRURY**

And then there are the covers, which vary greatly, from *MAD* magazine-style caricatures to a garish interpretation of Imagic's *Microsurgeon*. My favourite graces issue 4: a teenage girl gazing wantonly at a VIC-20 transforming into joystick form, like Jung's Electra Complex reimagined in *Minecraft*.

Seeing all seven issues of *Blip* together on my bookshelf of course makes me smile and not only because prices seem to have risen considerably, with some asking for silly money for issue 1. Yet it makes me sad that it was so short-lived and reminds me of other magazines which didn't last long. *Big K* in the mid-Eighties (12 issues), *Arcade* in the Nineties (24 issues) and the much missed *Cheat Street* in the Noughties (tagline, "Too cool for school"), which lasted just two and is something **Retro Gamer**'s launch editor Martyn Carroll mysteriously leaves off his CV. Maybe there's an article to be written about these brief candles? Until then, I'll keep flicking through the pages of my little collection, often while playing the Tomy handheld for the ultimate *Blip* wraparound experience.

*I of course have every issue of **Retro Gamer** but that cannot truly count as a 'complete collection' as **RG** will never end. [Oh no! You've jinxed us - Ed]

MY FAVOURITE BLIP FEATURES

BEST BITS

FIND THE FAKE (ISSUE 3)
Readers are challenged with identifying the made-up game hidden amongst three genuine titles.

WHERE THE JOYSTICK LEADS (ISSUE 4)
Correctly predicts the rise of online gaming and the World Wide Web but then ruins it by suggesting one day, you'll be having a conversation with a computer and believe it's a real person. Never.

VIDEOGAMES GO HOLLYWOOD (ISSUE 5)
A look at the growing trend of movie-licensed videogames that were popular at the time.

BEHIND THE SCENES AT IMAGIC (ISSUE 6)
A fascinating account of being shown around Imagic HQ by cofounder Pat Ransil, made more poignant when you know it all went tits up months later.

BLIP
The Video Games Magazine
Spider-Man Plays SPIDER-MAN
WITH GREAT POWER COMES GREAT RESPONSIBILITY... TO MASTER SPIDER-MAN ON THE ATARI VCS.
TIPS FOR POPULAR COIN-OPS LIKE ZAXXON WERE A REGULAR PART OF BLIP AND MUST HAVE BEEN VERY HANDY IN A PRE-INTERNET AGE.
YOU CAN FIND ALL ISSUES OF BLIP DIGITISED AT ARCHIVE.ORG BUT NOTHING BEATS HOLDING A 40-YEAR-OLD COMIC IN YOUR HANDS.

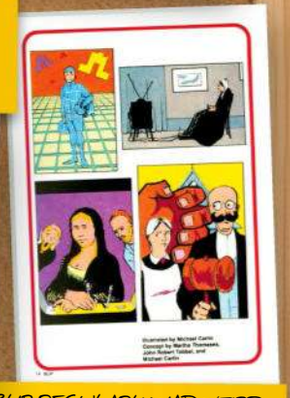
THIS IS EXACTLY WHAT WE IMAGINE THE STORYBOARDS FOR THE LATEST MARIO MOVIE LOOKED LIKE.

THE IMAGIC FEATURE IN ISSUE 6 IS GREAT, AS IS THE BOLD MICROSURGEON COVER ART.

THIS CARTOON MADE ME SMILE, THOUGH NOT ALL THE HUMOUR HAS AGED WELL. OR AT ALL.

COME ON, WE'VE ALL FELT LIKE GOING "HULK SMASH" ON A RUBIK'S CUBE AT LEAST ONCE IN OUR LIVES.

THE WINNERS OF THE GAME DESIGN COMPETITION IN ISSUE 1 WERE REVEALED IN ISSUE 5 AND I'M UP FOR ANY GAME FEATURING SHEEP.



BLIP REGULARLY HAD WEIRD FEATURES, LIKE THIS ONE – CAN YOU GUESS THE FAMOUS PAINTINGS THESE PASTICHES ARE BASED ON?

BLIP IS FULL OF PERIOD ADVERTS, LIKE THIS ONE FOR THE KOOL-AID MAN GAME. OHH YEAH!!

GET MY EXCITING NEW KOOL-AID MAN™ VIDEO GAME FREE!
JUST SEND 125 PROOF-OF-PURCHASE POINTS WITH THE MAIL-IN CERTIFICATE BELOW!
Ohh Yeah!!
FREE

ME WITH MY FAVOURITE BLIP COVER.

MY MAGAZINE ROMANCE

Readers reveal their own beloved periodicals

Forgotten Worlds
Moustaches, receding hairlines, thick-rim glasses and heavy 'dad vibes' were all par for the course at *Video Games And Computer Entertainment* (*VG&CE*). It was dorky, but I always liked it.

Retromash
Your Sinclair. Loved their anarchic humour, as well as their non-gaming articles. I made a pilgrimage to Rathbone Towers when I was 11 years old, only to be gutted to find that it was just a normal London office building.

The Misunderstood Raw Mass
Super Play. The amazing covers by Wil Overton caught my eye, and upon closer inspection I was immediately sold. Loved their tone and focus on imports.

Marco/Gamb
I collected *GamePro*. I loved their coverage of videogames, but I also loved that they had sections like art attack, mini strategy guides and alter egos for their writers.

Arsenal Tom
N64 Magazine. Amazing writing and you really felt like you got to know the team behind it. My mum threw away my collection about 20 years ago to my dismay and I've been ruining my finances rebuilding it ever since. [Me too - Ed]

Ox Geek
Amiga Power. I bought every issue from the first to the last. Everything about the magazine resonated with me. Even now, when I look at an old issue, it gives me a warm feeling.

TheRetroGuyAU
Retro Gamer is all I need.

Robert August de Meijer
I have every issue of *Edge*. It's the only magazine honest enough to write how bad most games are but when a great game comes out, nobody describes why so well!

Otakuman5000
Both iterations of *GameFan Magazine*. It had the most import coverage, it was well designed and the writing was top notch.

MAILBAG

HAVE YOUR SAY... SEND US A LETTER OR MAKE YOURSELF HEARD ON SOCIAL MEDIA – **TWITTER.COM/RETROGAMER_MAG**

WIN!

Every month, one lucky writer-in will receive a spanking copy of one of our classic retro books. Good luck everyone!

STAR LETTER

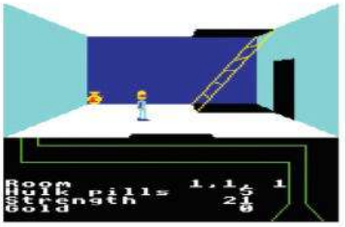
RETRO FOR ALL

Dear **Retro Gamer**,
I'm sure you get this a lot, but what's the big deal about how old something needs to be in order to qualify as retro? I'm in my late-20s and some of my happiest memories are playing on my dad's Xbox 360 with him or just watching him play games. I associate that machine with my youth, and judging from what I see online, many others do the same with even older machines like the Amiga, PlayStation and Nintendo 64. The Xbox 360 has been surpassed by at least two generations of newer Xboxes now, so there's no way it can be considered new (in my opinion at least). I play a lot of Xbox 360 games on my Xbox Series X now, so I was delighted to see that system get some coverage in issue 247. If people stopped worrying about what is and isn't retro they'd probably have a lot more fun.
Lucas Turner

Thanks for writing in, Lucas. We've never understood the arguments around retro gaming, but they have been going on forever. Yours is one of the more sensible takes on the subject so have a book as a little treat.

» [Xbox 360] Lucas was a teenager when *Dead Or Alive 4* came out, so he considers it a retro game.

» [Switch] Dean is attempting to collect every *Zelda* game. Are any other readers doing something similar?



» [Acorn Electron] Skeleton has fond memories of *Escape From Moonbase Alpha*.

UNDERPOWERED, BUT EXCITING

Hi Darran,
Regarding the Acorn Electron. I recall at school there was a big buzz around the BBC Micro due to its great arcade conversions, so people were checking what the Electron could run and how much compromise there might be, as it was a cheaper alternative. My best friend, Matt (RIP), bought an Electron along with *Escape From Moonbase Alpha*. I remember watching with intrigue; a sci-fi graphic adventure with 3D rooms, it was a really exciting time. The only problem being Matt was rather reluctant to let me have a go for some reason! I don't recall the Electron being a massive success, though we were just getting in to booze and girls so perhaps my memory is vague.
Regards,
Skeleton O'Rourke

We've not played *Escape From Moonbase Alpha* before, so thanks for introducing it to us, Skeleton. It might be quite interesting to do a comparison piece looking at Electron and BBC Micro games. We'll look for a suitable freelancer that will be able to do such an article justice.

GOTTA BUY 'EM ALL

Dear **Retro Gamer**,
Do you ever get the urge to get a complete set of games? I've recently decided to buy every *Zelda* game that's ever been released because I love the franchise so much. I'm really enjoying *Tears Of The Kingdom* and already have a respectable amount of *Zelda* games, but feel I may have missed the boat, as certain *Zelda* titles are now very expensive. Does anyone on the team have a full series of games from a franchise?
Kind regards,
Dean Cooper

That should be quite the impressive collection when you are finished, Dean. In terms of the team, until recently, Darran had a physical release of every Westen *Fire Emblem* game, but he refused to buy the physical version of *Shadow Dragon & The Blade Of Light* because it only included a digital code.

DEFINING AN ERA

Dear **Retro Gamer**,
Since the start of the new year, a friend and I have been discussing what game typifies the era when console games dominated our youth. For weeks we have gone back and forth, crossed genres, and come to no clear decision. It was the early Nineties and it seems to be unanswerable.

My last thought was *F-Zero* on the SNES – with the impact of its Mode 7 graphics marking a big shift in gaming visuals at the time. His last effort was *Streets Of Rage 2* on the Mega Drive – for what he considered to be better than arcade quality gaming you could enjoy at home. We've changed our minds lots of times,

» [SNES] James feels that *F-Zero* really defined the Nineties.

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and will no doubt do so again. If you had to name one, what would it be?
James

What an interesting question, James. The Nineties is difficult as it covered so many generations of systems, from the Spectrum to the Dreamcast. Nick is opting for *Crash Bandicoot* for combining the move to 3D, dominance of PlayStation and continuing the mascot trend in one killer package, while Darran feels *Super Mario 64* revolutionised 3D game worlds.

LOST IN TRANSLATION

Dear **Retro Gamer**,
Do you ever think technology will get to a stage where I can easily read text in Japanese games? I love the survival horror genre but many games are getting quite expensive. I'd save a fortune buying Japanese releases, but the Japanese text is a high barrier and I'm far too lazy to learn the language. Any help you could offer would be greatly appreciated.
Susan Baker

Nick decided to start learning Japanese as a way of solving this very issue, while Darran is lazy and has resorted to using apps instead. Google Translate seems fairly decent for deciphering menus, but we're not sure how it would tackle lengthy descriptions. Maybe give it a try and see if it works for you?

DISCUSSED THIS MONTH

Retrotink 5X-Pro

With his PVM on the way out, Darran recently decided to invest in a Retrotink 5X-Pro and he's been incredibly impressed with it so far. After using Nick and his cousin for tech support he's now got it looking great on his LG C8 OLED and has tried it on a variety of systems, including the N64, which looks fantastic. As a result he's gone back to playing *Ocarina Of Time* again, but will he find the strength to get through the dreaded Water Temple?

» [Xbox] PAL copies of *Silent Hill 2* can reach nearly £100 on Xbox. Its Japanese counterpart rarely passes £20.

Your say

» [NES] Rare's *Battletoads & Double Dragon: The Ultimate Team* is a nice showcase of the NES' capabilities.

Every month, Retro Gamer asks a question on social media and prints the best replies. This month we wanted to know…

What's the most technically impressive NES game?

James
Batman: Return Of The Joker would be my vote. It's better looking than the Genesis game and loads of fun. Big sprites, parallax scrolling and a great Sunsoft score.

Game Music Gaiden
If you are including Famicom games then *Summer Carnival '92 Recca* has got to be worth a mention, it plays so fast and moves loads of sprites around. Otherwise, cliche though it is, *Super Mario Bros 3* has to be one of the most impressive.

Kevin Judge
I remember being amazed by the intro design and music to *Mega Man 2*. The cityscape gives way to mountaintops as the camera scrolls up to the top of a high-rise building. In kicks the music and the inclusion of the wind through the hair. It's perfection!

Chill Dragoon
Little Samson impressed me quite a bit in every category.

Philnemba
Kirby's Adventure due to how ridiculously impressive the colour palette is to where I would dare say its near SNES quality. It also has lots of parallax scrolling including that one level with the rotating tower.

Precursor Dave
GI Joe: A Real American Hero. It's stunning for a NES game.

Heinz Hartz
Castlevania III: Dracula's Curse, one of the best *Castlevania* experiences and the VRC6 sound chip still beats like a king.

Alex
Battletoads! Not that many people will have made it that far, but the last level had a really impressive rotating central tower.

John Knight
Micro Machines. What it achieves on that hardware, and with such a smooth framerate, shouldn't be possible.

Burned Retinas
Castlevania III: Dracula's Curse was pretty visually progressive in the late days of the console. It's one of the few NES games I recall utilising parallax scrolling with the fog-layered river.

AlphaDonutGuy
The Legend Of Zelda. The scope and size of the game for what they had to work with is pretty incredible.

Dez
Battletoads & Double Dragon: The Ultimate Team is the most technically impressive NES game I played: static and dynamic shadow cues indicate 3D depth, parallax all over, incredible music, swinging, high-speed areas, destroyable areas… it's bonkers that it was a NES game.

Edgar Parente
Summer Carnival '92 Recca. It didn't make sense to me how smooth and fast it all moved.

retro GAMER

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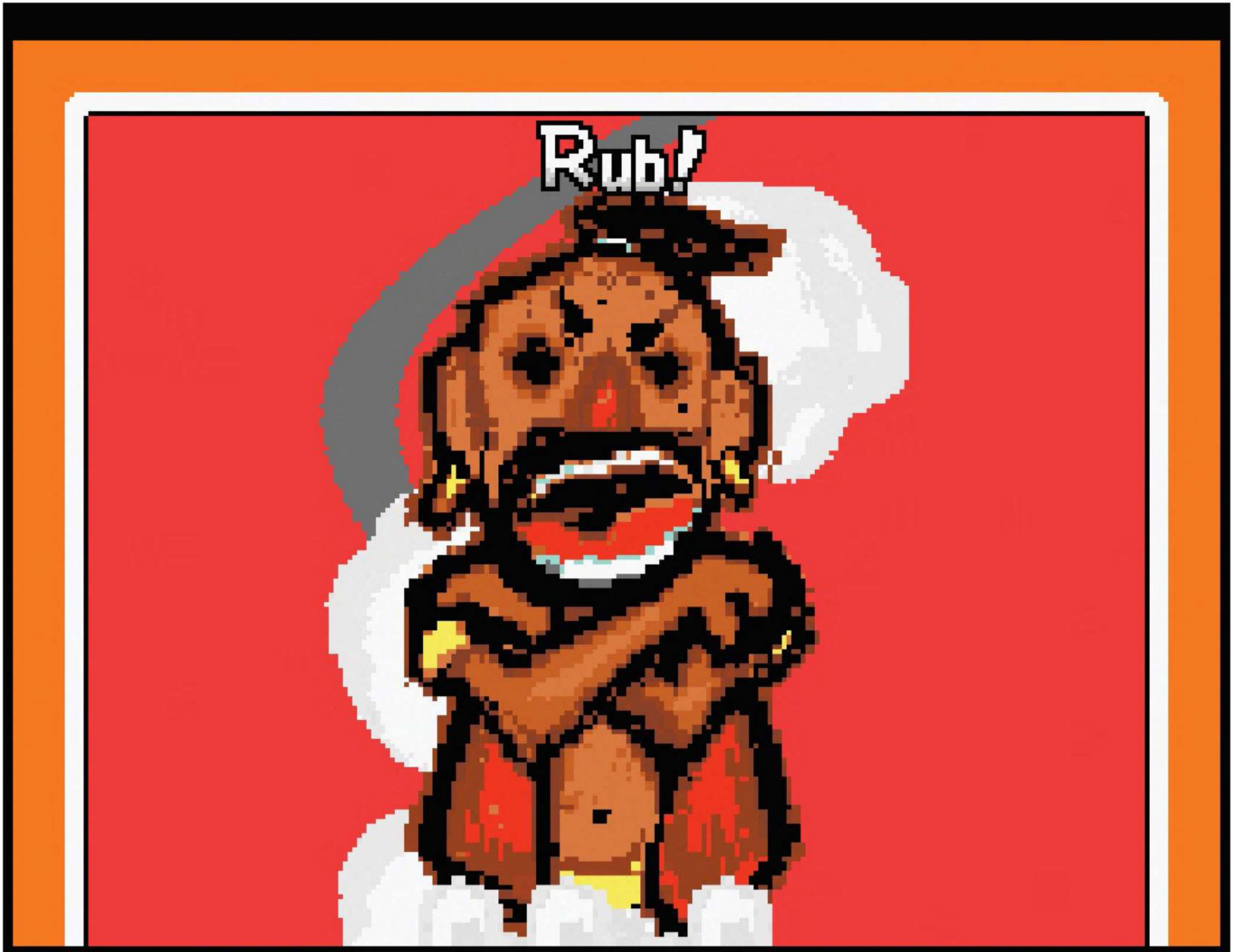
Rub!

WarioWare: Touched!

LET'S ALL RUB AWAY TOGETHER

» NINTENDO DS » 2004
» NINTENDO SPD, INTELLIGENT SYSTEMS

One of the reasons I love Nintendo's DS is because its games felt so different. Some gamers saw stylus controls as a gimmick, a way to blind you to the older technology that was at the heart of Nintendo's new handheld, but I just saw all the possibilities those controls offered instead.

Granted, there's a lot of shovelware on the DS, but there is on any successful console. The trick is to find the gems, and *WarioWare: Touched!* is not only a gem of the highest order, but was one of those early launch games that highlighted just how innovative Nintendo's new console could be.

Developed alongside *WarioWare: Twisted!* for the GBA, *Touched!* was designed to showcase the capabilities of the DS, while *Twisted!*'s minigames focussed on showcasing that game's built-in gyro sensor and rumble features. Both do a great job, but I feel *Touched!* has the edge because the developers found so many inventive ways to use the handheld's stylus.

One minute you're rubbing a dog's head or blowing into the DS' mic to cool something down, the next you're popping balloons with the stylus or manipulating a skeleton. As with previous *WarioWare* games you've only got a few seconds to perform each task and everything gets faster as play continues.

And play you will, because *Touched!* is terrific fun. Yes, the storyline is just as throwaway as the ones from previous games in the series and yes it won't take too long to burn your way through the game's main mode. Fortunately, part of the fun of *WarioWare* games is to improve your high scores and *Touched!* gives you plenty of opportunities to do just that. Add in a delightfully nutty art style and some pretty memorable boss fights and *Touched!* becomes the sort of game that deserves to be in every DS collection.

ENDGAME

SOCKET

» He's fast, he's blue and he's the star of a Mega Drive mascot platform game. That's right, it's Socket! Wait, were you expecting someone else? No matter – we're checking out this import exclusive, known as Time Dominator 1st in Japan, to see what a platform game mascot does when the world is safe. Let's skip to the end and find out...

01

» On his way back from beating up the Time Dominator, Socket stops by the Springfield Mystery Spot to complete his final assignment – rescuing the baseball legend Ozzie Smith from its incomprehensible clutches.

02

» This fails to pan out for the daredevil drake, so he decides to head back home in his little time capsule. Given that they took place throughout time, the world will surely know of his many heroic exploits.

03

» Alas, as the capsule opens poor old Socket discovers that this is not the case. The answering machine holds no messages, and any talk of *Time Dominator 2nd* will clearly have to wait until much, much later.

04

» Apparently, there are just too many critters saving the world right now. Some fast hedgehog, a skateboarding dinosaur of some kind, and even one that everybody thinks is an ant, but is actually some kind of alien ninja. Socket knows what must be done.

05

» He places himself in the stasis chamber, hoping to wait out the mascot platform boom. "Wake me up when everybody forgets about Sonic The Hedgehog," he says. As far as anyone knows, Socket is still asleep in that capsule, waiting for his moment to shine.

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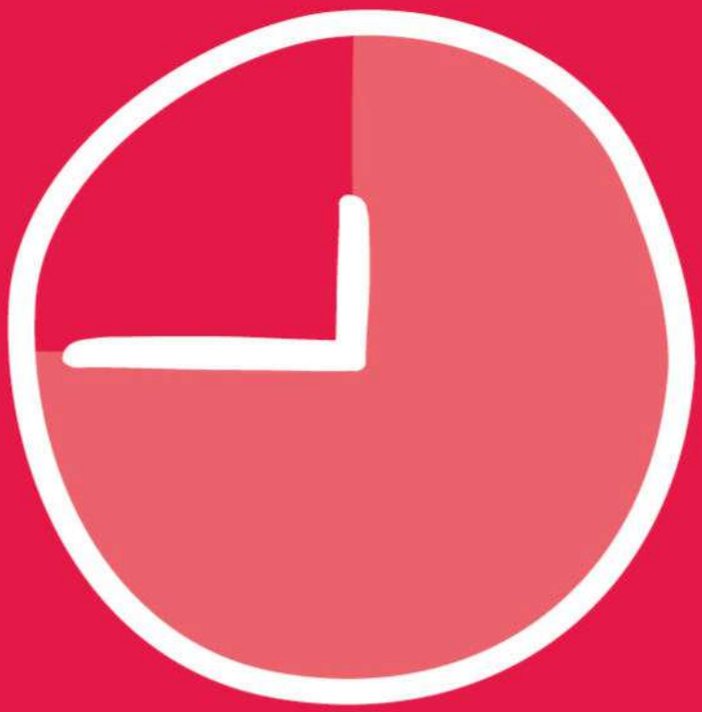

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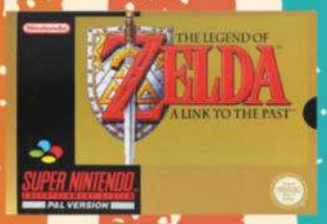

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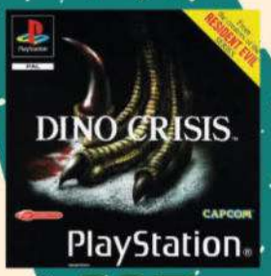

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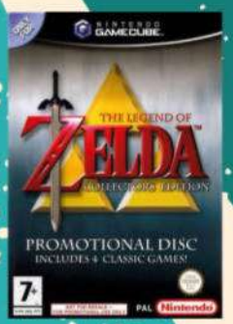

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